2011 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING REPORT

United Technologies Corporation
Pratt & Whitney Division
Willow Brook and Willow Brook Pond
East Hartford, Connecticut

January 2012

Volume 2 of 3

Prepared for

UNITED TECHNOLOGIES CORPORATION
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Prepared by

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Comm. No. 88UT059.001

RDMS DocID 109634

Pratt & Whitney
400 Main Street
East Hartford, CT 06108

Pratt & Whitney
A United Technologies Company

January 26, 2012

State of Connecticut
Department of Energy & Environmental Protection
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Attn: Maurice R. Hamel

RE: United Technologies Corporation
Pratt & Whitney Division
Post Remediation Maintenance and Monitoring
Willow Brook and Willow Brook Pond (SRD-130) and Willow Street North

Dear Mr. Hamel:

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53-a-157b of the Connecticut General Statues and any other applicable law.

Sincerely,

UNITED TECHNOLOGIES CORPORATION
PRATT & WHITNEY DIVISION

1/26/12

L. Renée Welsh
Director, EHS & Facilities – MC&O

Attachment

cc: Gil Richards, DEEP
Lauren Levine, UTC
Brian Cutler, LEA
Juan Perez, EPA

Loureiro Engineering Associates, Inc.

January 26, 2012

State of Connecticut
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79 Elm Street
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Attn: Maurice R. Hamel

RE: United Technologies Corporation
Pratt & Whitney Division
Post Remediation Maintenance and Monitoring
Willow Brook and Willow Brook Pond (SRD-130) and Willow Street North
LEA Comm. No. 88UT059

Dear Mr. Hamel:

In accordance with Paragraph B.1.e of the above referenced Consent Order and Appendix C and D of the document entitled *Remedial Action Work Plan and Request for Variance Engineered Control of Polluted Soils, Willow Street and Willow Street North PCB Remediation Project,* approved by the Department of Environmental Protection (CTDEP) on February 10, 2006 and the Modification to the Willow Brook Pond and Willow Street North Groundwater Monitoring Program approved by CTDEP on August 12, 2010, attached please find the 2010 Annual Post Remediation Maintenance and Groundwater Monitoring Report for Willow Brook and Willow Brook Pond and Willow Street North. The initial maintenance and monitoring activities were initiated following the August 31, 2002 completion of remediation activities at Willow Brook Pond and were augmented to include those monitoring and maintenance activities associated with the Willow Street North Project following completion on August 11, 2006. In accordance with Paragraph B.8 of the above referenced Consent Order, I hereby certify that:

I *have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53-a-157b of the Connecticut General Statues and any other applicable law.*

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An Employee Owned Company

If you should have any questions or comments, please contact me at (860) 410-2968 or Lauren Levine of United Technologies Corporation at (860) 728-6520.

Sincerely,

LOUREIRO ENGINEERING ASSOCIATES, INC.

Brian A. Cutler, P.E., L.E.P.
President

Attachment

cc: Gil Richards, CTDEEP
Juan Perez, EPA
L. Renée Welsh, P&W
Lauren Levine, UTC

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ACRONYMS

CSM	Conceptual Site Model
CT DEEP	Connecticut Department of Energy and Environmental Protection
CT DEP	Connecticut Department of Environmental Protection
CT ETPH	Connecticut Extractable Total Petroleum Hydrocarbons
CWTP	Concentrated Waste Treatment Plant
DEEP	Department of Energy and Environmental Protection
DQA	Data Quality Assessment
DQO	Data Quality Objective
DUE	Data Usability Evaluation
EDD	Electronic Data Deliverable
ELUR	Environmental Land Use Restriction
EPA	United States Environmental Protection Agency
ERA	Environmental Resource Associates
GB PMC	GB Pollutant Mobility Criteria
IDEC	Industrial/Commercial Direct Exposure Criteria
IMS	Information Management System
IVC	Industrial/Commercial Volatilization Criteria
LCI	Loureiro Contractors, Inc.
LCS	Laboratory Control Sample
LEA	Loureiro Engineering Associates, Inc.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NOV	Notice of Violation
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethylene
PE	Performance Evaluation
PID	Photoionization Detector
QA/QC	Quality Assurance/Quality Control
RAWP/RFV	Remedial Action Work Plan, Request for Variance
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RCSAs	Regulations of Connecticut State Agencies
RCP	Reasonable Confidence Protocol
RDEC	Residential Direct Exposure Criteria
RPD	Relative Percent Difference
RSRs	Remediation Standard Regulations
RVC	Residential Volatilization Criteria
SOP	Standard Operating Procedure
SWPC	Surface Water Protection Criteria
TCE	Trichloroethylene
TSCA	Toxic Substances Control Act
UTC	United Technologies Corporation
VC	Volatilization Criteria
VOCs	Volatile Organic Compounds

UNITS

mg/kg	milligrams per kilogram
mg/l	milligrams per liter
µg/l	micrograms per liter

1. INTRODUCTION

United Technologies Corporation (UTC)/Pratt & Whitney retained Loureiro Engineering Associates, Inc. (LEA) to perform the post-remediation maintenance and groundwater monitoring associated with the remediation of polychlorinated biphenyl (PCB) contaminated soil and sediment within and immediately surrounding Willow Brook, Willow Brook Pond, and Willow Street North (herein after referred to as the "Project Area") at the UTC/Pratt & Whitney manufacturing facility in East Hartford, Connecticut (herein after referred to as the "Site"). The remediation of soil and sediment within and surrounding Willow Brook and Willow Brook Pond was undertaken to satisfy the requirements of Consent Order SRD-130 and was completed on August 31, 2002. The remediation of soil in areas between and below Willow Street and Willow Brook Pond (the Willow Street North Project) was undertaken by UTC/Pratt & Whitney on a voluntary basis in accordance with the document entitled *Remedial Action Work Plan and Request for Variance, Engineered Control of Polluted Soils, Willow Street and Willow Street North PCB Remediation Project* (RAWP/RFV), approved by the Connecticut Department of Environmental Protection (CT DEP) on February 10, 2006. The Willow Street North Project was completed on August 11, 2006. The CT DEP stated in a letter dated December 20, 2010 that UTC is in compliance with Consent Order SRD-130.

The following report has been prepared in accordance with the requirements of Appendix C and D of the RAWP/RFV, and the CT DEP approved Modification to the Willow Brook Pond and Willow Street North Groundwater Monitoring Program. The CT DEP approved modifications are described in more detail in Section 4. This report presents the 2011 annual summary of post-remediation groundwater and maintenance monitoring conducted to verify the adequacy of the remediation and long-term effectiveness of the engineered control installed at Willow Brook, Willow Brook Pond and Willow Street North.

The absence of confirmed detectable concentrations of PCBs in groundwater indicates that the remediation activities performed to date have been effective in eliminating PCBs as a groundwater contaminant source. VOCs, ETPH and total metals at locations within the Project Area have remained stable over time with no increasing trends, with the exception of barium and chlorinated VOCs in monitoring well WT-MW-58, barium in monitoring well WT-MW-40 and multiple metals in monitoring well WT-MW-59. These apparent increasing trends will continue to be evaluated through the performance of additional semi-annual monitoring events as well as supplemental monitoring conducted on a voluntary basis.

There are sufficient groundwater data at this time to make a compliance determination relative to the Connecticut Remediation Standard Regulations (RSRs). However, as required by the regulations, additional rounds of groundwater monitoring will continue to be performed based on the revised monitoring plan approved by CT DEP on August 12, 2010.

2. LOCATION AND SITE DESCRIPTION

The UTC/Pratt & Whitney East Hartford manufacturing facility is located at 400 Main Street in East Hartford, Connecticut. A Site Location Map is presented as Figure 2-1. The facility encompasses approximately 769-acres of contiguous land. Pratt & Whitney initiated aircraft engine manufacturing operations in East Hartford in December 1929. Current operations are conducted in an approximate 4 million square foot complex and include administration and management, manufacturing, testing, research and development and ancillary services. All of these activities take place in the western portion of the 769-acre property. The Rentschler Airport and the Klondike Area occupy the eastern portion of the property. UTC/Pratt & Whitney previously used these two areas as an airport and a storage/testing area, respectively.

Willow Brook Pond is located in the northwestern portion of the UTC/Pratt & Whitney East Hartford facility property and is approximately 4 acres in size. Willow Brook is a small stream transecting the UTC/Pratt & Whitney facility from the northern portion of the Rentschler Airport to the northwest portion of the current UTC/Pratt & Whitney operations complex. Willow Brook flows in a southwesterly direction in an open channel from Rentschler Airport, is then hard-piped underground to the inlet of Willow Brook Pond, and continues from the pond as an open channel to a culvert under Main Street. From Main Street, Willow Brook flows in an open channel for a distance of approximately 2,500 feet to the confluence with the Connecticut River. Willow Brook Pond, a single body of water when first created, has been modified various times through the years. It is now comprised of two ponds (Upper Willow Brook Pond and Lower Willow Brook Pond) subdivided by a culvert. The portion of Willow Street which was the subject of the 2006 remediation is adjacent to lower Willow Brook Pond.

During the week of November 9, 2009, the level of Willow Brook Pond was lowered to facilitate the long term operation of the dry weather pumping station associated with NPDES Permit CT0001376 Discharge Serial Number (DSN) 003. A secondary benefit to lowering the pond's water level was the provision of additional flood storage volume and improvement of the hydraulics of the facility's storm sewer system by eliminating chronic backwater conditions upstream of the dam. Since November of 2009, the water level in Upper and Lower Willow Brook Ponds has remained low.

3. BACKGROUND

During routine draining of Willow Brook Pond in September 1997, an oil sheen was noticed seeping through the sediment. Pratt & Whitney reported the sheen to the United States Coast Guard and the CT DEP in accordance with discharge reporting requirements. Following the detection of PCBs in a sediment sample, the CT DEP issued Pratt & Whitney a Notice of Violation (NOV), No. PCB 97-08, on November 7, 1997. In response to the NOV, during the period from December 1997 to April 1999, UTC/Pratt & Whitney developed a sampling work plan and conducted three phases of investigation. These investigations provided the analytical data to sufficiently define the horizontal and vertical limits of contamination and served as the basis for the development of a remediation plan. During the period from April 1999 to November 2000, UTC/Pratt & Whitney identified and evaluated remedial alternatives to address the PCB-contaminated sediments within and immediately surrounding Willow Brook Pond. The RAWP was submitted to the CT DEP and the United States Environmental Protection Agency (EPA) in November of 2000.

During the period from November 2000 to June 2001, numerous permit applications and plans were submitted to regulatory agencies to secure approvals for elements of the remediation project. In addition, during this period of time, the CT DEP was drafting Consent Order SRD-130 codifying expectations for the remediation of the Site. The Consent Order was signed by UTC/Pratt & Whitney on July 19, 2001 and the CT DEP on August 1, 2001.

In addition to satisfying the CT DEP requirements for remediation, UTC/Pratt & Whitney was also involved in a formal voluntary Resource Conservation and Recovery Act (RCRA) Corrective Action Program. On January 19, 2001, the EPA issued a determination that the remediation of contaminated sediments within Willow Brook and Willow Brook Pond was necessary. In order to obtain a decision that the remediation of the Site would be considered a final remedy for the contamination, EPA RCRA Corrective Action staff were involved in the review of the RAWP and were included in all project related correspondence with the various regulatory agencies.

The remediation and restoration activities performed within and immediately surrounding Willow Brook and Willow Brook Pond took place during the period from July 2, 2001 through August 31, 2002. The overall remedial action objective was to physically remove from the site, via excavation and off-site disposal, all soil and sediment containing total PCB concentrations in excess of 25 milligrams per kilogram (mg/kg) and then install a geotextile, soil and rock cap (engineered control) over the entirety of Willow Brook Pond and the open channel of Willow

Brook from Willow Brook Pond to Main Street. In addition to satisfying the requirements of the RSRs, the project was also implemented as part of a final remedy under the RCRA Corrective Action and Toxic Substances Control Act (TSCA) programs. Three areas within the Site were assigned additional remedial objectives. For the wetland and the southern portion of the Lower Willow Brook Pond, the additional remedial action objective was to physically remove all soil and sediment exhibiting contaminants at concentrations greater than the Residential Direct Exposure Criteria (RDEC) for PCBs. For the footprint of the Process Water Facility, inclusive of the small embayment west of the Process Water Facility, the additional remedial action objective was to meet the RDEC for PCBs in soils within 4-feet of the final grade, the Industrial/Commercial Direct Exposure Criteria (IDEC) for PCBs in soils defined as inaccessible by the RSRs, and the GB Pollutant Mobility Criteria (GB PMC) for soils above the seasonal high water table. All remedial action objectives were met during the course of the project.

In 2006, additional remediation of PCB contaminated soil was performed in two separate areas (areas South and East of Upper Willow Brook Pond, and North of the Concentrated Waste Treatment Plant [CWTP] area). The remediation activities were initiated on March 30, 2006 and were completed on August 11, 2006. The overall remedial action objective was to physically remove from the site, via excavation and off-site disposal, all soil and sediment containing total PCBs at concentrations in excess of 25 mg/kg and then install a geotextile and soil cap (engineered control) over the entirety of the project limits. In addition to satisfying the requirements of the RSRs, the project was also implemented as part of a final remedy under the RCRA Corrective Action and TSCA programs. Specific areas of the cap were constructed with a paved roadway surface or crushed rock surface for areas of the cap located below Willow Street or along the embankment of the ponds, respectively. For the areas along the perimeter of the engineered control, the additional remedial action objective was to meet the RDEC for PCBs for soils within 4-feet of the final grade, the IDEC for PCBs in inaccessible soils, and the GB PMC for soils above the seasonal high water table. All remedial action objectives were met during the course of the project.

The remedial action objectives also included the implementation of two institutional controls to ensure the long-term protectiveness of the remedy. The institutional controls consist of 1) an Environmental Land Use Restriction (ELUR) to ensure that the affected area will not be used for residential purposes and to prohibit excavation and 2) a fence around the entire Project Area, exclusive of the roadway, to preclude access to Willow Brook and Willow Brook Pond. The fence around the Project Area remains in place and a draft ELUR for the entirety of the Willow Brook and Willow Brook Pond Project limits as well as the Willow Street North Project limits

was submitted to the CT DEP on September 22, 2006 and was subsequently approved on October 14, 2010. The ELUR was filed with the Town of East Hartford on March 4, 2011.

4. GROUNDWATER MONITORING

Groundwater monitoring activities were performed in accordance with subsection (f) of Section 22a-133k-3 of the Regulations of Connecticut State Agencies (RCSAs). The groundwater monitoring plans detailed in Appendix D of the RAWP/RFV for Willow Brook and Willow Brook Pond and Appendix C of the RAWP/RFC for Willow Street North were designed to determine:

- The effectiveness of soil remediation in preventing further pollution of groundwater by substances from the release area;
- The effectiveness of any remediation taken to eliminate or minimize identified health or safety risks associated with such release; and
- Whether applicable surface water protection criteria (SWPC) and volatilization criteria (VC) have been met.

In June 2002, a total of eleven groundwater monitoring wells (WT-MW-40 through WT-MW-50) were installed around the periphery of Willow Brook and Willow Brook Pond. In September 2006, three additional monitoring wells (WT-MW-57 through WT-MW-59) were installed as part of the remediation activities completed in 2006. One new monitoring well (WT-MW-19SR) was installed in April 2008 to replace monitoring well WT-MW-19S. The locations of these monitoring wells are depicted on the Site Plan included as Figure 4-1 of this report.

On August 12, 2010, CT DEP granted approval to modify the groundwater monitoring program for Willow Brook Pond and Willow Street North (the Project Area). The modifications to the monitoring program included a reduction in the monitoring frequency from quarterly to semi-annually and the discontinued sampling of monitoring wells WT-MW-41, WT-MW-43, WT-MW-45 and WT-MW-49. Consequently, a total of two monitoring events were completed in 2011 in the months of March and September. The next scheduled event will be performed in March 2012.

4.1 Description of Groundwater Monitoring Activities

Groundwater samples were collected during the March 2011 and September 2011 sampling events from a total of eleven groundwater monitoring wells (WT-MW-19SR, WT-MW-40, WT-MW-42, WT-MW-44, WT-MW-46, WT-MW-47, WT-MW-48, WT-MW-50 and WT-MW-57 through WT-MW-59) located within the Project Area. It should be noted that no

sample was obtained from monitoring well WT-MW-19SR during the September sampling event because there was not enough groundwater in the well to yield the required sample volume. Alternatively, a groundwater sample was collected from monitoring well WT-MW-19I as part of the September sampling event.

A total of five additional groundwater samples, including one duplicate sample, were collected from wells WT-MW-19SR, WT-MW-50, WT-MW-58, and WT-MW-59 on June 21, 2011. While these wells are located within the Willow Brook & Willow Brook Pond Project Area, these specific samples were collected as part of a separate, ongoing groundwater/surface water interaction study that was conducted independent of the Willow Brook/Willow Brook Pond Post-Remediation Monitoring Program. The intent of this voluntary study is to gain a greater understanding of the effects of standing surface water and potential other hydraulic influences on groundwater flow and contaminant transport in the northwest portion of the Site. Groundwater analytical data obtained from monitoring wells WT-MW-19SR, WT-MW-50, WT-MW-58 and WT-MW-59 by means of the additional sampling event were incorporated into the Project Area database and evaluated as part of the 2011 Post-Remediation Monitoring Program.

All groundwater samples were sent under chain of custody control to Accutest Laboratories (Accutest) of Marlborough, Massachusetts and were analyzed for the following parameters: PCBs by Method 8082; VOCs by EPA Method 8260B; Connecticut extractable total petroleum hydrocarbons (CT ETPH) by the Connecticut Department of Energy and Environmental Protection (CT DEEP) approved method; and unfiltered metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc). In addition, one duplicate sample, trip blank sample, and equipment blank sample was collected and analyzed for each sampling event. Copies of field paperwork are included as Appendix A and copies of laboratory reports are included in Appendix B of this report.

4.2 Groundwater Elevations

Depth to water was measured from the well within the Project Area during the two sampling events using an electronic water level indicator. Water levels were measured to the nearest 0.01 foot. Water level measurements were collected by LEA on the following two dates: March 21, 2011; and October 28, 2011. Water-level information was used to evaluate groundwater flow directions and horizontal hydraulic gradients in the upper portion of the unconsolidated aquifer.

Generalized groundwater contour maps from the March, and September, 2011 monitoring events have been included as Figures 4-2 and 4-3, respectively. It should be noted that Willow Brook Pond was partially drained to facilitate the long-term operation of the dry weather pumping

station in November of 2009 and remained partially drained through September of 2011. As such, monitoring well WT-MW-19SR, located in the vicinity of the staff gauge, lacked the volume of water necessary for collection of a groundwater sample during the September monitoring event.

4.3 Quality Assurance and Quality Control Procedures

During the course of the 2011 post-remediation monitoring, a significant amount of information was obtained for the Project Area. This information included analytical data for groundwater samples; field measurements; sample tracking forms; and other documentation associated with sample collection and analysis. Ensuring that the data generated during the post-remediation monitoring was of sufficient quality to meet the data quality objectives (DQOs) for the project, performance and documentation of quality assurance/quality control (QA/QC) procedures for field and office activities was essential. The following DQOs were developed for the Post-Remediation Groundwater Monitoring Program for the Site:

- Samples collected are of sufficient quality and quantity to assess the groundwater conditions at the Project Area.
- Data obtained are of sufficient quality and quantity to support a regulatory compliance determination.
- Data are sufficient to determine handling and disposal requirements for purged groundwater and decontamination solutions generated during the post-remediation groundwater monitoring activities.

The various types of QA/QC procedures used to ensure that the data generated during the investigation was of sufficient quality to meet the DQOs for the project included the collection and/or and analysis of trip blanks, equipment blanks, field duplicate samples, and performance evaluation (PE) samples. A detailed description of the methods employed to collect and analyze these QA/QC samples is provided in Appendix C.

All groundwater samples collected during the 2011 post-remediation groundwater sampling were analyzed in accordance with the CT DEP Reasonable Confidence Protocols (RCPs), which provide additional QA/QC measures for the applicable EPA SW-846 and Connecticut methods. The RCPs provide specific QA/QC requirements that the laboratory must follow during analysis of environmental samples. QA/QC information provided by laboratories using the RCP methods was assessed and evaluated in accordance with the guidelines for performing Data Quality Assessments (DQAs) and Data Usability Evaluations (DUEs). The results from the DUE

indicated that the data generated during the 2011 groundwater sampling events were usable for the intended purpose. A further explanation of the DQA and DUE process and a discussion of the results of the DQA and DUE are provided in Appendix C.

5. GROUNDWATER QUALITY

This section summarizes the results of groundwater sampling performed at the Project Area during 2011. Specifically, the following subsections summarize the reported concentrations for each constituent and provide a discussion of the results of the QA/QC measures employed for the groundwater sampling conducted at the Project Area.

5.1 Summary of Analytical Data

A total of 30 groundwater samples (including field duplicate samples) were collected during 2011 from Project Area monitoring wells. Five of these samples were collected and analyzed for a combination of VOCs and hexavalent chromium only to assess short term trends in groundwater quality as part of the ongoing groundwater/surface water interaction study described in Section 4.1. A summary of sampling and analytical information is included as Table 5-1. A summary of constituents detected in 2011 groundwater samples is included as Table 5-2. The following is a summary of the groundwater analytical results for each contaminant of concern.

Polychlorinated Biphenyls: A total of 24 groundwater samples collected during 2011 were analyzed for PCBs. PCBs were not detected in any groundwater samples collected during the March 2011 or September 2011sampling events.

Volatile Organic Compounds: A total of 29 groundwater samples were analyzed for VOCs during 2011. Of the 29 samples analyzed, 17 contained detectable concentrations of VOCs. The maximum concentration of each compound in micrograms per liter (µg/l) is as follows:

Benzene	4.1 µg/l
Chloroethane	39.6 µg/l
Chloroform	21.8 µg/l
1,1-Dichloroethane	51.2 µg/l
1,2-Dichloroethane	3.7 µg/l
1,1-Dichloroethylene	354 µg/l
cis-1,2-Dichloroethylene	553 µg/l
trans-1,2-Dichloroethylene	3.5 µg/l
Methylene Chloride	2.5 µg/l
Tetrachloroethylene	286 µg/l
Tetrahydrofuran	42.7 µg/l
1,1,1-Trichloroethane	130 µg/l

1,1,2-Trichloroethane	1.9 µg/l
Trichloroethylene	665 µg/l
Vinyl Chloride	88.4 µg/l

Total Petroleum Hydrocarbons: A total of 24 groundwater samples collected during 2011 were analyzed for CT ETPH. Of the 24 samples analyzed, 20 samples contained detectable concentrations. The maximum concentration of CT ETPH was detected in the September 2011 sample from monitoring well WT-MW-59 at a concentration of 1.23 milligrams per liter (mg/l).

Metals: A total of 29 groundwater samples were collected and analyzed for unfiltered metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc) during 2011. Of the 29 samples analyzed, 14 of these samples were also analyzed for hexavalent chromium. Of the 29 samples analyzed, 20 samples contained detectable concentrations of metals. The maximum concentration of each metal is as follows:

Arsenic	0.0128 mg/l
Barium	0.678 mg/l
Cadmium	0.336 mg/l
Copper	0.588 mg/l
Nickel	4.38 mg/l
Silver	0.0952 mg/L
Zinc	0.0610 mg/l

5.2 Data Quality Assessment and Data Usability Evaluation

All data were evaluated with respect to quality by conducting a DQA and DUE in accordance with the methodology described in the November 2007 guidance document entitled, *Reasonable Confidence Protocols* and presented in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document*. The DQA was performed to assess the quality of the analytical data in each laboratory analytical report package.

QA/QC issues identified during the DQA process included:

- Results for the surrogate recoveries for PCBs outside the accepted ranged for variability;
- Results for Laboratory Control Sample (LCS) for VOCs outside the accepted range of variability;

- Recoveries for Matrix Spike/Matrix Spike Duplicate (MS/MSD) for VOCs outside the accepted range of variability;
- Recoveries for initial calibration curve and continuing calibration curve outside the accepted range of variability for specific VOC constituents; and
- pH was greater than 2 units for sample preservation for VOCs.

The DQA worksheets are provided in Appendix C. The DQA resulted in identifying data for which the quality could affect its potential use in decision-making. After the laboratory analytical data were evaluated during the DQA, a DUE was performed. The DUE took into account the following:

- The site-specific conceptual site model (CSM);
- Knowledge of the contaminant types, concentrations, and distribution;
- Objectives for the data collection effort and the intended use of the data; and
- Results from field QA/QC sampling.

In general, the QA/QC deficiencies identified do not pertain to any of the primary constituents of concern at the Project Area. For example, VOCs such as acrylonitrile and methylene bromide were reported with LCS, MS/MSD, initial calibration curve and/or continuing calibration curve values that are outside of the accepted range of variability. However, these particular VOCs do not represent constituents of concern.

There were four instances in which the QA/QC deficiencies were associated with VOCs that have been identified as constituents of concern. For two VOC samples the pH level associated with the sample preservation method was high, resulting in a potential low bias for aromatic VOCs. In one of the affected samples, aromatic VOCs are not typically detected. In the other sample, benzene was detected at a concentration that is consistent with previous concentrations reported for unbiased data. Therefore, these deficiencies did not affect the usability of the data.

The MS/MSD recoveries for cis-1,2-dichloroethylene associated with groundwater collected from monitoring well WT-MW-58 in September 2011, were very low (4% and 14%, respectively), which indicates a low bias. However, the cis-1,2-dichloroethylene concentration reported (542 micrograms per liter µg/l) in the affected groundwater sample was consistent with previous concentrations reported in this monitoring well. The MS/MSD recoveries for trichloroethylene (TCE) associated with groundwater collected from monitoring well WT-MW-50 in September 2011, were also below acceptable limits (64% and 59%, respectively). TCE was reported at a concentration of 268 µg/l in the affected groundwater sample. TCE was also

detected in a duplicate groundwater sample collected from monitoring well WT-MW-50, for which no QC issues resulting in a directional bias were identified, at a concentration of 387 µg/l. It appears that the low MS/MSD recoveries may have resulted in the reporting of a lower TCE result in the affected sample. However, the higher TCE detection reported in the duplicate groundwater sample was evaluated for decision making purposes. In both instances, these deficiencies did not affect the usability of the data.

Taking into consideration multiple lines of evidence, results from the DUE indicated that the data generated during the 2011 groundwater sampling events were usable for the intended purpose. A more detailed discussion of the DQA and DQE results is included in Appendix C.

5.3 Observed Trends in Groundwater

There are sufficient groundwater data at this time to document contaminant trends at particular monitoring wells, as seven years of groundwater sampling has been performed. Graphs were generated for constituents in each monitoring well using data from March 2006 to present. Graphs were prepared for the following compounds: cis-1,2-dichloroethylene, 1,1-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene (PCE), TCE, vinyl chloride, CT ETPH, arsenic, barium, nickel and zinc in each monitoring well and are included as Appendix D. A separate graph depicting the concentrations of cadmium and copper in groundwater collected from monitoring well WT-MW-59 is also provided. It should be noted that in the generation of constituent concentration graphs, a value of one half of the reporting limit was used for graphing the non-detected results. Data trends for the past six years are discussed by analytical group in the paragraphs below.

Polychlorinated Biphenyls: PCBs have remained at non-detectable levels from March 2004 to present for all groundwater sample locations with the exception of one groundwater sample collected from monitoring well WT-MW-44 in March 2007 and one groundwater sample collected from monitoring well WT-MW-43 in June 2010.

As was described in the 2007 annual report, the sample collected from well WT-MW-44 in March 2007 was re-extracted by Accutest and the initial results were confirmed. However, the result of the analysis was questioned as groundwater in this monitoring well originates offsite from beneath residences along Risley Street. Monitoring well WT-MW-44 in located within an area that was confirmed during remediation of Willow Pond to be void of PCBs in soil. No PCBs were detected in this monitoring well during prior or subsequent groundwater sampling events. To further investigate the PCB detection, an additional co-located sample was collected at monitoring well WT-MW-44 on April 23, 2007 and was submitted concurrently to Accutest

and Lancaster Laboratories of Lancaster, Pennsylvania. PCBs were not detected by either laboratory in the co-located sample. PCBs were not detected in subsequent sampling from this location in 2007, 2008, 2009, 2010 or 2011. As a result, there is a preponderance of evidence supporting a conclusion that the initial March 2007 data were not indicative of a condition that existed in the aquifer at monitoring WT-MW-44.

The detection of PCBs in monitoring well WT-MW-43 during the June 2010 monitoring event was also immediately questioned, especially because this well is located hydraulically upgradient of Willow Brook and Willow Brook Pond and representative of groundwater flowing from adjoining residential properties. Multiple steps were taken to evaluate whether the reported PCBs represented a real and replicable result as detailed in the 2010 Annual Report. None of the follow-up actions resulted in the identification of PCBs above the laboratory reporting limit. In summary, there are multiple lines of evidence to support that the PCB concentration detected during the June 2010 sampling event was attributed to a false positive identification by the laboratory.

Total Petroleum Hydrocarbons: CT ETPH have been consistently detected in a majority of the wells within the Project Area from March 2006 to present in groundwater samples. The highest concentrations of CT ETPH in 2011 were detected in the September groundwater sample from monitoring well WT-MW-59. Based on an evaluation of the concentration graphs from March 2006 to present, no discernable upward or downward trends were observed for CT ETPH.

Volatile Organic Compounds: VOCs have been consistently detected from March 2006 to present in groundwater samples collected from monitoring wells WT-MW-40 and WT-MW-50 and from September 2006 to present in groundwater samples collected from monitoring wells WT-MW-57, WT-MW-58 and WT-MW-59. VOCs have also been historically reported in groundwater samples collected from monitoring well WT-MW-19S/WT-MW-19SR.

Since 2010, the concentrations of VOCs in groundwater samples collected from monitoring well WT-MW-40 appear to have either decreased or stabilized. As evidenced on the VOC trend graphs, the concentrations of chlorinated VOCs, mainly 1,1-dichloroethane, cis-1,2-dichloroethylene, PCE, TCE and vinyl chloride, in groundwater collected from monitoring well WT-MW-58 have increased since the September 2010 sampling event. Additional investigation and monitoring will be conducted to further assess the VOC trend observed in monitoring well WT-MW-58.

Metals: One or more metals have been consistently detected from March 2006 to present in groundwater samples collected from monitoring wells WT-MW-40, WT-MW-48 and

WT-MW-50 and from September 2006 to present in groundwater samples collected from monitoring wells WT-MW-57, WT-MW-58, and WT-MW-59. An upward trend of barium in groundwater from monitoring wells WT-MW-40 and WT-MW-58 was observed. The concentrations of nickel, cadmium, copper and silver in groundwater collected from monitoring well WT-MW-59 appear to exhibit an upward trend. Monitoring well WT-MW-40 is located on the southern side of Willow Brook and monitoring wells WT-MW-58 and WT-MW-59 are located on the southern side of Lower Willow Brook Pond. Additional investigation and monitoring is being conducted to assess metal concentrations at the point of discharge into Willow Brook and Lower Willow Brook Pond.

5.4 Evaluation of Results Relative to the RSRs

In accordance with Appendix D of the RAWP/RFV, the groundwater analytical data have been compared to the default, numeric SWPC, Industrial/Commercial Volatilization Criteria (IVC) and Residential Volatilization Criteria (RVC). It should be noted, that historic releases occurring outside the Willow Brook and Willow Brook Pond and Willow Street North site have impacted groundwater quality. As such, the following discussions contain references to historic data as a means to provide an understanding of groundwater quality in the vicinity of Willow Brook and Willow Brook Pond prior to implementation of remediation activities.

5.4.1 Surface Water Protection Criteria

The following metals exceeded the default, numeric SWPC in at least one groundwater sample collected during the 2011 monitoring events: arsenic, cadmium, copper, nickel and silver. Arsenic exceeded the default, numeric SWPC of 0.004 mg/l in groundwater samples collected from both sampling events from monitoring wells WT-MW-48 and WT-MW-50 and from the March sampling event from monitoring well WT-MW-59. The maximum arsenic concentrations detected in groundwater sampled from monitoring wells WT-MW-48, WT-MW-50 and WT-MW-59 were 0.0128 mg/l, 0.0072 mg/l and 0.0043 mg/l, respectively. Copper exceeded the default, numeric SWPC of 0.048 mg/l in groundwater collected from monitoring well WT-MW-19I during the September sampling event at a concentration of 0.0551 mg/l. Concentrations of cadmium, copper, nickel and silver detected in groundwater collected from monitoring well WT-MW-59 during both sampling events exceeded the default, numeric SWPC. Cadmium, copper, nickel and silver were reported at maximum concentrations of 0.336 mg/l, 0.588 mg/l, 4.38 mg/l and 0.0952 mg/l, respectively.

The concentrations of 1,1-dichloroethylene reported in groundwater collected from monitoring well WT-MW-50 in March and September 2011, which ranged from 162 µg/l to 354 µg/l,

exceeded the default, numeric SWPC of 96 µg/l. The concentrations of PCE reported in groundwater collected from monitoring well WT-MW-58 in March, June and September 2011, which ranged from 132 µg/l to 286 µg/l, exceeded the default, numeric SWPC of 88 µg/l. PCE was also reported in groundwater collected from monitoring well WT-MW-19I in September and groundwater collected from monitoring well WT-MW-50 in March at concentrations that exceeded the default, numeric SWPC.

A comparison of 2011 groundwater results to the default, numeric SWPC is presented in Table 5-3.

5.4.2 Volatilization Criteria

Since the existing use of the Site is industrial/commercial in nature, and the future use of the Site will most likely remain industrial/commercial, compliance with the IVC was evaluated for the Site. However, due to the proximity of residential areas to the north and to the west of the Site, compliance with the RVC was also evaluated. It should be noted that based on the site-wide groundwater elevation data, groundwater within the Project Area does not flow toward the buildings to the north of Willow Brook or the buildings located west of the facility. A summary of the comparisons of the 2011 monitoring well data against the IVC and RVC are presented on Table 5-4 and Table 5-5, respectively.

Vinyl chloride exceeded the IVC and RVC of 2 µg/l in groundwater samples collected from monitoring wells WT-MW-19I, WT-MW-40, WT-MW-50, WT-MW-58 and WT-MW-59 at maximum concentrations of 17.5 µg/l, 6.2 µg/l, 32.8 µg/l, 88.4 µg/l, and 20.1 µg/l, respectively.

The concentration of 1,1-dichloroethylene exceeded the IVC of 6 µg/l and the RVC of 1 µg/l in groundwater samples collected from monitoring well WT-MW-50 during the March, June and September sampling events and from monitoring well WT-MW-58 during the June and September sampling events. The highest concentration of 1,1-dichloroethylene of 354 µg/l was reported in groundwater collected from monitoring well WT-MW-50. Concentrations of 1,1-dichloroethylene reported in groundwater collected from monitoring wells WT-MW-19I, WT-MW-40 and WT-MW-58 (March sampling event only) exceeded the RVC only.

The TCE concentrations reported in groundwater samples collected from monitoring well WT-MW-50 in March (665 µg/l and 658 µg/l in the duplicate sample) exceeded the RVC of 219 µg/l and the IVC of 540 µg/l. TCE was also reported at concentrations that exceeded the RVC only in groundwater collected from WT-MW-19I during the September sampling event,

monitoring well WT-MW-50 during the September sampling event and monitoring well WT-MW-58 during the June sampling event.

Historic groundwater analytical data for upgradient monitoring wells located south of Upper and Lower Willow Brook Pond and the stream channel west of Willow Brook Pond have exhibited concentrations of VOCs in excess of the concentrations discussed above. As a result, it has been concluded that the levels of VOCs detected during monitoring events are not attributable to contamination that was remediated as part of the Willow Brook and Willow Brook Pond and the Willow Street North remediation projects.

5.4.3 Compliance Determination

There are sufficient groundwater data at this time to make a compliance determination relative to the RSRs. However, as required by the regulations, additional rounds of groundwater monitoring will continue to be performed based on the revised monitoring plan approved by CT DEP on August 12, 2010.

In August 2010, the CT DEP approved a reduction in monitoring frequency from quarterly to semi-annual monitoring and the discontinued monitoring of four of the fifteen wells within the Project Area. The CT DEP approval was granted because the groundwater data collected to date support that remediation activities completed have been effective in eliminating PCBs as a potential groundwater contaminant source and that the concentrations of VOCs, ETPH and total metals at locations within the Project Area have remained stable over time with no increasing trends, with the exception of barium and chlorinated VOCs in monitoring well WT-MW-58, barium in monitoring well WT-MW-40 and multiple metals in monitoring well WT-MW-59. These apparent increasing trends will continue to be evaluated through the performance of additional semi-annual monitoring events as well as supplemental monitoring conducted on a voluntary basis.

6. ENGINEERED CONTROL MAINTENANCE & MONITORING

The post-remediation maintenance program for the engineered control was developed to ensure that the structural integrity, design permeability, and effectiveness of the engineered control will be maintained. This maintenance program was developed to:

- Periodically inspect the engineered control;
- Identify measures to be taken to prevent run-on and run-off of storm water from eroding or otherwise damaging the engineered control; and
- Identify measures to be taken to correct the effects of any settling, subsidence, erosion or other damaging events or conditions.

The engineered control and the area surrounding the engineered control were inspected in March and September 2011 in the following areas:

1. Signs of erosion.
2. Signs of settling.
3. Loss of vegetative cover.
4. Undesirable growth.
5. Signs of ponding and run on.
6. Condition of fencing and gates.
7. Condition of rip-rap in Willow Brook stream channel.
8. Condition of stone layer in Willow Brook.
9. Burrowing animals.
10. Monitoring well network.

The Post-Remediation Maintenance Monitoring Forms are included in Appendix E and the findings are discussed below.

6.1 Summary of Maintenance & Monitoring Activities

The following section summarizes the maintenance issues and corrective actions that were implemented with respect to the engineered control during 2011.

- March 14, 2011 Inspection - The condition of the cap identified during the March 14, 2011 cap inspection was consistent with conditions reporting during the previous cap inspection that was completed on October 6, 2010. An erosion channel was observed on the southern bank, just below the manmade dam. Woody growth measuring greater than 0.5-inches in diameter and 2-feet tall was present along the eastern end of Lower Willow Pond and the western half of Upper Willow Pond within the boundaries of the cap. These maintenance items were addressed in May 2011 and are discussed in detail in Section 6.2 below.

- September 28, 2011 Inspection - The cap was reported to be in overall good condition during the September 28, 2011 cap inspection. There were no signs of settling, erosion, loss of vegetative cover, undesirable growth, ponding, run off, or burrowing animals observed during the inspection. Fencing, gates, rip-rap, and the stone layer in Willow Brook were all noted to be in good condition. There were no visible wells IDs, but the wells are easily identified with a map. Standing water was observed in several of the road boxes.

6.2 Corrective Action

Loureiro Contractors, Inc. (LCI) performed maintenance on the cap from May 23, 2011 through May 25, 2011 to address deficiencies documented during previous cap inspections. Maintenance services included the removal of coarse woody vegetation in the general vicinity of Upper Willow Brook Pond and Lower Willow Brook Pond and the repair of an erosion rill in the immediate vicinity of the dam on Lower Willow Brook Pond.

Specifically, LCI removed coarse woody vegetation from the rip-rap slope protection around the perimeter of upper Willow Brook Pond and around the eastern end of lower Willow Brook Pond. The work completed in the vicinity of lower Willow Brook Pond spanned from the eastern end of the pond to approximately 210 feet west along the northern and southern banks. All removed coarse woody vegetation was chipped. The chipped materials were spread across the north and northwestern portion of the former parking lot located to the northeast of upper Willow Brook Pond.

Existing rip-rap and gravel located on the property was used to stabilize an erosion rill located on the southern bank of lower Willow Brook, just below the dam. At the time of the September 2011 inspection, the cap appeared to be in good condition. The road boxes containing standing water, as documented in the September 2011 inspection, will be repaired with new covers in 2012.

7. CONCLUSIONS

A total of two monitoring events were performed in 2011 for Willow Brook and Willow Brook Pond in accordance with the Modified Groundwater Monitoring Program for Willow Brook Pond and Willow Street North that was approved by CT DEP in August 2010. Copies of the LEA letter requesting modifications to the groundwater monitoring program and the CT DEP approval letter are provided as Appendix F.

No PCBs were detected in the groundwater samples collected and analyzed in 2011. Other constituents not believed to be related to either the Willow Brook and Willow Brook Pond Project or the Willow Street North Project were detected at levels consistent with background water quality data for the Site. VOCs, CT ETPH and metals were detected in the groundwater samples analyzed during the 2011 monitoring events. The concentrations of 1,1-dichloroethylene, PCE, arsenic, cadmium, copper, nickel, and silver exceeded the default, numeric SWPC. Additionally, the current IVC and/or RVC was exceeded in several groundwater samples for vinyl chloride, 1,1-dichloroethylene and TCE. These observations are generally consistent with historic data.

There are sufficient groundwater data at this time to determine trends or to make a compliance determination relative to the RSRs. As specified in the CT DEP approved Modified Groundwater Monitoring Program, semi-annual groundwater monitoring will continue to be conducted to further substantiate the presence or absence of trends in constituent concentrations at particular monitoring wells at the site. The absence of detectable concentrations of PCBs in groundwater indicates that the remediation activities performed to date have been effective in eliminating PCBs as a groundwater contaminant source. VOCs, ETPH and total metals at locations within the Project Area have remained stable over time with no increasing trends, with the exception of barium and chlorinated VOCs in monitoring well WT-MW-58, barium in monitoring well WT-MW-40 and multiple metals in monitoring well WT-MW-59. These apparent increasing trends will continue to be evaluated through the performance of additional semi-annual monitoring events as well as supplemental monitoring conducted on a voluntary basis.

Two maintenance monitoring inspections were conducted in 2011 following the March and September 2011 monitoring events. The road boxes containing standing water, as documented in the September 2011 inspection, will be repaired with new covers in 2012. Additional inspections and corrective action measures, if necessary, will continue to be implemented as part of the maintenance and monitoring program.

TABLES

Table 5-1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

Sample Information					Analysis Information							
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	Analyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
WT-MW-19I	1167439	03/21/2011	23.00 - 26.00	GWS							x	
WT-MW-19I	1241021	09/28/2011	23.00 - 26.00	GWS		X			x	X	X	
WT-MW-19SR	1167447	03/22/2011	3.00 - 12.50	GWS		x			x	X	X	
WT-MW-19SR	1230739	06/21/2011	3.00 - 12.50	GWS		x					x	
WT-MW-40	1167437	03/21/2011	10.00 - 19.00	GWS		X			x	X	X	
WT-MW-40	1241020	09/28/2011	10.00 - 19.00	GWS		x			x	X	X	
WT-MW-42	1167443	03/22/2011	1.00 - 10.00	GWS		x			x	x	x	
WT-MW-42	1241019	09/28/2011	1.00 - 10.00	GWS		x			x	x	X	
WT-MW-44	1167444	03/22/2011	5.00 - 14.00	GWS		x			x	x	x	
WT-MW-44	1241015	09/28/2011	5.00 - 14.00	GWS		X			x	X	x	
WT-MW-46	1167448	03/22/2011	-1.50 - 7.50	GWS		x			x	X	x	
WT-MW-46	1241018	09/29/2011	-1.50 - 7.50	GWS		x			x	X	X	
WT-MW-47	1167442	03/22/2011	6.00 - 15.00	GWS		x			x	x	X	
WT-MW-47	1241024	09/29/2011	6.00 - 15.00	GWS		x			x	X	X	
WT-MW-48	1167441	03/22/2011		GWS		x			x	X	X	
WT-MW-48	1241025	09/29/2011		GWS		x			x	X	X	
WT-MW-50	1167446	03/22/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1167451	03/22/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1230738	06/21/2011	16.00 - 26.00	GWS		X					x	
WT-MW-50	1230747	06/21/2011	16.00 - 26.00	GWS		X						
WT-MW-50	1241016	09/28/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1241030	09/28/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-57	1167440	03/22/2011	8.00 - 18.00	GWS		X			x	X	X	
WT-MW-57	1241022	09/29/2011	8.00 - 18.00	GWS		X			x	X	X	
WT-MW-58	1167438	03/21/2011	8.00 - 18.00	GWS		X			x	X	X	
WT-MW-58	1230737	06/21/2011	8.00 - 18.00	GWS		X					x	
WT-MW-58	1241017	09/28/2011	8.00 - 18.00	GWS		X			x	X	X	
WT-MW-59	1167445	03/22/2011	8.00 - 18.00	GWS		X			x	X	X	
WT-MW-59	1230736	06/21/2011	8.00 - 18.00	GWS		X					x	
WT-MW-59	1241023	09/29/2011	8.00 - 18.00	GWS		X			x	X	X	

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Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
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	Location ID	WT-MW-19I	WT-MW-19I	WT-MW-19SR	WT-MW-19SR	WT-MW-40	WT-MW-40	WT-MW-40
	Sample ID	1241021	1241021	1167447	1167447	1167437	1167437	1241020
	Sample Date	09/28/2011	09/28/2011	03/22/2011	03/22/2011	03/21/2011	03/21/2011	09/28/2011
	Sample Time	13:46	13:46	14:30	14:30	11:31	11:31	12:20
	Sample Depth	23.00' - 26.0	23.00' - 26.0	3.00' - 12.50	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-5	MC4052-6	M98677-12	M98677-13	M98644-1	M98644-2	MC4052-3
Constituent	Units							
Depth of Well	Ft	25.23	25.23	11.8	11.8	17.77	17.77	17.75
Depth to Water	Ft	10.85	10.85	11.51	11.51	11.99	11.99	12.05
Oxygen, Dissolved (field)	mg/L	1.43	1.43	6.50	6.50	0.10	0.10	0.79
Specific Conductivity (field)	uS/cm	4578	4578	7467	7467	9.84	9.84	8118
Temperature	C	17.7	17.7	8.8	8.8	11.7	11.7	21.6
Turbidity (field)	NTU	4.50	4.50	9.34	9.34	1.32	1.32	0.75
Water Elevation	Ft	24.78	24.78			20.11	20.11	20.05
pH (field measurement)	SU	7.04	7.04	6.95	6.95	6.53	6.53	7.01
Date Metals Analyzed	-		10/01/2011		03/29/2011		03/24/2011	
Date Organics Analyzed	-	10/10/2011				04/01/2011		
Date Physical Analyzed	-	10/11/2011		03/29/2011		03/25/2011		10/11/2011
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L		0.0523		0.392		0.397	
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L		0.0551					
Nickel (unfiltered)	mg/L		0.237		0.0454			
Silver (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L				0.0332		0.0610	
Oxidation-Reduction Potential	mV	112.2	112.2	-20.5	-20.5	-35.9	-35.9	-85.9
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.465		0.241		0.521		0.307
Benzene	ug/L	4.1						
1,1,1-Trichloroethane	ug/L	1.1						
1,1,2-Trichloroethane	ug/L							
1,1-Dichloroethane	ug/L	10				12.0		
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
1,1-Dichloroethylene	ug/L	4.3				2.1		
trans-1,2-Dichloroethylene	ug/L					3.1		

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-19I	WT-MW-19I	WT-MW-19SR	WT-MW-19SR	WT-MW-40	WT-MW-40	WT-MW-40
	Sample ID	1241021	1241021	1167447	1167447	1167437	1167437	1241020
	Sample Date	09/28/2011	09/28/2011	03/22/2011	03/22/2011	03/21/2011	03/21/2011	09/28/2011
	Sample Time	13:46	13:46	14:30	14:30	11:31	11:31	12:20
	Sample Depth	23.00' - 26.0	23.00' - 26.0	3.00' - 12.50	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-5	MC4052-6	M98677-12	M98677-13	M98644-1	M98644-2	MC4052-3
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L	74.3				8.9		
Vinyl Chloride	ug/L	17.5				6.2		
Tetrachloroethylene	ug/L	200						
Tetrahydrofuran	ug/L							
Methylene Chloride	ug/L	2.5						
Chloroform	ug/L	21.8						
Total Trihalomethanes (Calc.)	ug/L	21.8						
Trichloroethylene	ug/L	301				4.7		
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Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
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	Location ID	WT-MW-40	WT-MW-42	WT-MW-44	WT-MW-46	WT-MW-46	WT-MW-46	WT-MW-47
	Sample ID	1241020	1241019	1241015	1167448	1241018	1241018	1167442
	Sample Date	09/28/2011	09/28/2011	09/28/2011	03/22/2011	09/29/2011	09/29/2011	03/22/2011
	Sample Time	12:20	10:36	10:15	15:15	10:20	10:20	14:26
	Sample Depth	10.00' - 19.0	1.00' - 10.00	5.00' - 14.00	-1.50' - 7.50	-1.50' - 7.50	-1.50' - 7.50	6.00' - 15.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-4	MC4052-2	MC4052-10	M98677-14	MC4100-1	MC4100-2	M98677-19
Constituent	Units							
Depth of Well	Ft	17.75	6.74	13.65	12.65	12.65	12.65	14.45
Depth to Water	Ft	12.05	3.12	10.35	6.20	6.63	6.63	8.65
Oxygen, Dissolved (field)	mg/L	0.79	1.03	1.42	6.08	3.61	3.61	5.20
Specific Conductivity (field)	uS/cm	8118	265.4	431.2	249.3	385.3	385.3	0.376
Temperature	C	21.6	19.4	16.1	9.2	18.4	18.4	9.8
Turbidity (field)	NTU	0.75	1.35	3.87	1.65	4.21	4.21	1.24
Water Elevation	Ft	20.05	31.74	25.02	27.82	27.39	27.39	27.81
pH (field measurement)	SU	7.01	5.85	6.27	7.37	5.83	5.83	5.56
Date Metals Analyzed	-	10/01/2011	10/01/2011				10/03/2011	03/29/2011
Date Organics Analyzed	-			10/07/2011				
Date Physical Analyzed	-			10/11/2011	03/29/2011	10/08/2011		
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L	0.549	0.0732				0.0655	0.0968
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Silver (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Oxidation-Reduction Potential	mV	-85.9	161.8	151.8	13.6	201.0	201.0	102.8
Total Petroleum Hydrocarbons (CT ETPH)	mg/L			0.0867	0.103	0.115		
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichloroethane	ug/L							
1,1-Dichloroethane	ug/L							
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-40	WT-MW-42	WT-MW-44	WT-MW-46	WT-MW-46	WT-MW-46	WT-MW-47
	Sample ID	1241020	1241019	1241015	1167448	1241018	1241018	1167442
	Sample Date	09/28/2011	09/28/2011	09/28/2011	03/22/2011	09/29/2011	09/29/2011	03/22/2011
	Sample Time	12:20	10:36	10:15	15:15	10:20	10:20	14:26
	Sample Depth	10.00' - 19.0	1.00' - 10.00	5.00' - 14.00	-1.50' - 7.50	-1.50' - 7.50	-1.50' - 7.50	6.00' - 15.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-4	MC4052-2	MC4052-10	M98677-14	MC4100-1	MC4100-2	M98677-19
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L							
Vinyl Chloride	ug/L							
Tetrachloroethylene	ug/L							
Tetrahydrofuran	ug/L							
Methylene Chloride	ug/L							
Chloroform	ug/L			4.0				
Total Trihalomethanes (Calc.)	ug/L			4.0				
Trichloroethylene	ug/L							
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Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-47	WT-MW-47	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-50
	Sample ID	1241024	1241024	1167441	1167441	1241025	1241025	1167446
	Sample Date	09/29/2011	09/29/2011	03/22/2011	03/22/2011	09/29/2011	09/29/2011	03/22/2011
	Sample Time	12:20	12:20	12:21	12:21	14:30	14:30	11:50
	Sample Depth	6.00' - 15.00	6.00' - 15.00					16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4100-7	MC4100-8	M98677-20	M98677-21	MC4100-10	MC4100-9	M98677-10
Constituent	Units							
Depth of Well	Ft	14.37	14.37	7.60	7.60	7.53	7.53	5.00
Depth to Water	Ft	8.78	8.78	4.99	4.99	5.43	5.43	3.37
Oxygen, Dissolved (field)	mg/L	2.55	2.55	0.12	0.12	0.09	0.09	1.89
Specific Conductivity (field)	uS/cm	226.1	226.1	0.691	0.691	853	853	3750
Temperature	C	19.0	19.0	7.0	7.0	19.8	19.8	7.4
Turbidity (field)	NTU	0.6	0.6	4.43	4.43	3.16	3.16	5.24
Water Elevation	Ft	27.68	27.68	24.89	24.89	24.45	24.45	20.15
pH (field measurement)	SU	5.81	5.81	6.51	6.51	6.69	6.69	7.06
Date Metals Analyzed	-		10/02/2011		03/29/2011	10/02/2011		
Date Organics Analyzed	-							04/02/2011
Date Physical Analyzed	-	10/08/2011		04/01/2011			10/08/2011	03/29/2011
Arsenic (unfiltered)	mg/L				0.0081	0.0128		
Barium (unfiltered)	mg/L		0.0552		0.0548	0.0804		
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Silver (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Oxidation-Reduction Potential	mV	200.5	200.5	-62.3	-62.3	93.7	93.7	-168.4
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.135		0.188			0.213	0.445
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							124
1,1,2-Trichloroethane	ug/L							1.5
1,1-Dichloroethane	ug/L							24.5
1,2-Dichloroethane	ug/L							3.5
Chloroethane	ug/L							12.0
1,1-Dichloroethylene	ug/L							349
trans-1,2-Dichloroethylene	ug/L							2.4

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-47	WT-MW-47	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-50
	Sample ID	1241024	1241024	1167441	1167441	1241025	1241025	1167446
	Sample Date	09/29/2011	09/29/2011	03/22/2011	03/22/2011	09/29/2011	09/29/2011	03/22/2011
	Sample Time	12:20	12:20	12:21	12:21	14:30	14:30	11:50
	Sample Depth	6.00' - 15.00	6.00' - 15.00					16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4100-7	MC4100-8	M98677-20	M98677-21	MC4100-10	MC4100-9	M98677-10
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L							134
Vinyl Chloride	ug/L							32.8
Tetrachloroethylene	ug/L							130
Tetrahydrofuran	ug/L							
Methylene Chloride	ug/L							
Chloroform	ug/L							5.9
Total Trihalomethanes (Calc.)	ug/L							5.9
Trichloroethylene	ug/L							665
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Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1167446	1167451	1167451	1230738	1230747	1241016	1241016
	Sample Date	03/22/2011	03/22/2011	03/22/2011	06/21/2011	06/21/2011	09/28/2011	09/28/2011
	Sample Time	11:50	11:50	11:50	13:30	13:30	12:45	12:45
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M98677-11	M98677-16	M98677-17	MC1274-5	MC1274-21	MC4052-12	MC4052-13
Constituent	Units							
Depth of Well	Ft	5.00	5.00	5.00	3.42	5.05	5.25	5.25
Depth to Water	Ft	3.37	3.37	3.37	5.05	3.42	3.37	3.37
Oxygen, Dissolved (field)	mg/L	1.89	1.89	1.89	1.56	1.56	0.05	0.05
Specific Conductivity (field)	uS/cm	3750	3750	3750	3199	3199	5110	5110
Temperature	C	7.4	7.4	7.4	27.9	27.9	23.2	23.2
Turbidity (field)	NTU	5.24	5.24	5.24	4.69	4.69	5.84	5.84
Water Elevation	Ft	20.15	20.15	20.15	18.47	20.10	20.15	20.15
pH (field measurement)	SU	7.06	7.06	7.06	7.20	7.20	6.80	6.80
Date Metals Analyzed	-	03/29/2011		03/29/2011				10/01/2011
Date Organics Analyzed	-		04/02/2011		06/26/2011	06/26/2011	10/07/2011	
Date Physical Analyzed	-		03/29/2011				10/11/2011	
Arsenic (unfiltered)	mg/L	0.0068		0.0058				0.0072
Barium (unfiltered)	mg/L	0.253		0.258				0.362
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L	0.0592		0.0601				
Silver (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L	0.0211		0.0246				
Oxidation-Reduction Potential	mV	-168.4	-168.4	-168.4	-164.1	-164.1	-153.6	-153.6
Total Petroleum Hydrocarbons (CT ETPH)	mg/L		0.475				0.365	
Benzene	ug/L		0.52		0.60	0.54		
1,1,1-Trichloroethane	ug/L		130		14.8	16.9	84.0	
1,1,2-Trichloroethane	ug/L		1.9				1.1	
1,1-Dichloroethane	ug/L		25.7		12.5	13.7	18.1	
1,2-Dichloroethane	ug/L		3.7					
Chloroethane	ug/L		11.3		34.5	39.6	22.5	
1,1-Dichloroethylene	ug/L		354		30.3	43.2	169	
trans-1,2-Dichloroethylene	ug/L		2.3		1.2	1.4	1.9	

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SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1167446	1167451	1167451	1230738	1230747	1241016	1241016
	Sample Date	03/22/2011	03/22/2011	03/22/2011	06/21/2011	06/21/2011	09/28/2011	09/28/2011
	Sample Time	11:50	11:50	11:50	13:30	13:30	12:45	12:45
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M98677-11	M98677-16	M98677-17	MC1274-5	MC1274-21	MC4052-12	MC4052-13
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L		145		42.6	54.8	89.7	
Vinyl Chloride	ug/L		32.2		12.3	16.9	22.2	
Tetrachloroethylene	ug/L		140		6.2	6.1	64.2	
Tetrahydrofuran	ug/L				42.7	36.5	25.0	
Methylene Chloride	ug/L							
Chloroform	ug/L		6.4				3.2	
Total Trihalomethanes (Calc.)	ug/L		6.4				3.2	
Trichloroethylene	ug/L		658		63.8	110	387	
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Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-58
	Sample ID	1241030	1241030	1167440	1167440	1241022	1241022	1167438
	Sample Date	09/28/2011	09/28/2011	03/22/2011	03/22/2011	09/29/2011	09/29/2011	03/21/2011
	Sample Time	12:45	12:45	10:16	10:16	12:10	12:10	13:41
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-16	MC4052-17	M98677-22	M98677-23	MC4100-3	MC4100-4	M98644-3
Constituent	Units							
Depth of Well	Ft	5.25	5.25	18.03	18.03	18.09	18.09	17.88
Depth to Water	Ft	3.37	3.37	11.24	11.24	11.48	11.48	12.13
Oxygen, Dissolved (field)	mg/L	0.05	0.05	0.28	0.28	0.08	0.08	0.68
Specific Conductivity (field)	uS/cm	5110	5110	7.47	7.47	2019	2019	2.22
Temperature	C	23.2	23.2	11.8	11.8	20.3	20.3	12.3
Turbidity (field)	NTU	5.84	5.84	4.14	4.14	3.98	3.98	4.29
Water Elevation	Ft	20.15	20.15	26.88	26.88	26.64	26.64	26.63
pH (field measurement)	SU	6.80	6.80	5.74	5.74	6.16	6.16	6.08
Date Metals Analyzed	-		10/01/2011		03/29/2011		10/02/2011	
Date Organics Analyzed	-	10/07/2011		04/02/2011		10/09/2011		04/01/2011
Date Physical Analyzed	-	10/11/2011		04/01/2011		10/08/2011		03/25/2011
Arsenic (unfiltered)	mg/L		0.0072					
Barium (unfiltered)	mg/L		0.354		0.615		0.281	
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L				0.0450			
Nickel (unfiltered)	mg/L				0.133			
Silver (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Oxidation-Reduction Potential	mV	-153.6	-153.6	62.9	62.9	0.4	0.4	25.6
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.372		0.281		0.181		0.509
Benzene	ug/L	0.50						
1,1,1-Trichloroethane	ug/L	80.7						
1,1,2-Trichloroethane	ug/L							
1,1-Dichloroethane	ug/L	18.8						4.6
1,2-Dichloroethane	ug/L	2.5						
Chloroethane	ug/L	20.8						
1,1-Dichloroethylene	ug/L	162						1.4
trans-1,2-Dichloroethylene	ug/L	1.7						

Table 5-2
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	Location ID	WT-MW-50	WT-MW-50	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-58
	Sample ID	1241030	1241030	1167440	1167440	1241022	1241022	1167438
	Sample Date	09/28/2011	09/28/2011	03/22/2011	03/22/2011	09/29/2011	09/29/2011	03/21/2011
	Sample Time	12:45	12:45	10:16	10:16	12:10	12:10	13:41
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-16	MC4052-17	M98677-22	M98677-23	MC4100-3	MC4100-4	M98644-3
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L	87.2		4.4		3.8		104
Vinyl Chloride	ug/L	20.0		1.4				8.7
Tetrachloroethylene	ug/L	58.5		3.1		2.7		132
Tetrahydrofuran	ug/L	25.0						
Methylene Chloride	ug/L							
Chloroform	ug/L	3.4						
Total Trihalomethanes (Calc.)	ug/L	3.4						
Trichloroethylene	ug/L	268		25.7		17.0		37.1

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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	Location ID	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59
	Sample ID	1167438	1230737	1241017	1241017	1167445	1167445	1230736
	Sample Date	03/21/2011	06/21/2011	09/28/2011	09/28/2011	03/22/2011	03/22/2011	06/21/2011
	Sample Time	13:41	12:15	15:20	15:20	14:51	14:51	10:35
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M98644-4	MC1274-3	MC4052-14	MC4052-15	M98677-8	M98677-9	MC1274-1
Constituent	Units							
Depth of Well	Ft	17.88	17.55			17.77	17.77	17.60
Depth to Water	Ft	12.13	12.32	12.15	12.15	12.60	12.60	12.54
Oxygen, Dissolved (field)	mg/L	0.68	1.01	1.41	1.41	NM	NM	0.28
Specific Conductivity (field)	uS/cm	2.22	2676	3823	3823	16416	16416	11577
Temperature	C	12.3	17.2	20.8	20.8	12.0	12.0	17.2
Turbidity (field)	NTU	4.29	4.90	5.57	5.57	NM	NM	4.79
Water Elevation	Ft	26.63	26.44	26.61	26.61	26.24	26.24	26.30
pH (field measurement)	SU	6.08	6.65	6.36	6.36	6.15	6.15	6.97
Date Metals Analyzed	-	03/24/2011			10/01/2011		03/29/2011	
Date Organics Analyzed	-		06/26/2011	10/07/2011		04/02/2011		06/26/2011
Date Physical Analyzed	-			10/11/2011		03/29/2011		
Arsenic (unfiltered)	mg/L						0.0043	
Barium (unfiltered)	mg/L	0.228			0.678		0.151	
Cadmium (unfiltered)	mg/L						0.291	
Copper (unfiltered)	mg/L						0.392	
Nickel (unfiltered)	mg/L						4.38	
Silver (unfiltered)	mg/L						0.0194	
Zinc (unfiltered)	mg/L						0.0278	
Oxidation-Reduction Potential	mV	25.6	6.6	68.3	68.3	65.8	65.8	66.0
Total Petroleum Hydrocarbons (CT ETPH)	mg/L			0.675		1.06		
Benzene	ug/L		0.82	0.74				
1,1,1-Trichloroethane	ug/L		13.7	39.7				
1,1,2-Trichloroethane	ug/L							
1,1-Dichloroethane	ug/L		42.2	51.2		8.1		8.0
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L		24.6	23.9				
1,1-Dichloroethylene	ug/L		7.3	16.8				
trans-1,2-Dichloroethylene	ug/L		1.3	3.5				

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
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	Location ID	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59
	Sample ID	1167438	1230737	1241017	1241017	1167445	1167445	1230736
	Sample Date	03/21/2011	06/21/2011	09/28/2011	09/28/2011	03/22/2011	03/22/2011	06/21/2011
	Sample Time	13:41	12:15	15:20	15:20	14:51	14:51	10:35
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M98644-4	MC1274-3	MC4052-14	MC4052-15	M98677-8	M98677-9	MC1274-1
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L		553	542		9.8		9.5
Vinyl Chloride	ug/L		88.4	69.9		8.9		7.7
Tetrachloroethylene	ug/L		280	286		2.7		3.0
Tetrahydrofuran	ug/L							
Methylene Chloride	ug/L							
Chloroform	ug/L							
Total Trihalomethanes (Calc.)	ug/L							
Trichloroethylene	ug/L		226	176		7.1		6.9
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Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
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	Location ID	WT-MW-59	WT-MW-59					
	Sample ID	1241023	1241023					
	Sample Date	09/29/2011	09/29/2011					
	Sample Time	14:38	14:38					
	Sample Depth	8.00' - 18.00	8.00' - 18.00					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4100-5	MC4100-6					
Constituent	Units							
Depth of Well	Ft	17.83	17.83					
Depth to Water	Ft	12.39	12.39					
Oxygen, Dissolved (field)	mg/L	0.75	0.75					
Specific Conductivity (field)	uS/cm	16347	16347					
Temperature	C	20.6	20.6					
Turbidity (field)	NTU	4.8	4.8					
Water Elevation	Ft	26.45	26.45					
pH (field measurement)	SU	6.58	6.58					
Date Metals Analyzed	-		10/02/2011					
Date Organics Analyzed	-	10/09/2011						
Date Physical Analyzed	-	10/08/2011						
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L		0.199					
Cadmium (unfiltered)	mg/L		0.336					
Copper (unfiltered)	mg/L		0.588					
Nickel (unfiltered)	mg/L		2.37					
Silver (unfiltered)	mg/L		0.0952					
Zinc (unfiltered)	mg/L		0.0246					
Oxidation-Reduction Potential	mV	62.3	62.3					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	1.23						
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichloroethane	ug/L							
1,1-Dichloroethane	ug/L	20.0						
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							

Table 5-2
SUMMARY OF CONSTITUENTS DETECTED IN GROUNDWATER
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-59	WT-MW-59					
	Sample ID	1241023	1241023					
	Sample Date	09/29/2011	09/29/2011					
	Sample Time	14:38	14:38					
	Sample Depth	8.00' - 18.00	8.00' - 18.00					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4100-5	MC4100-6					
Constituent	Units							
cis-1,2-Dichloroethylene	ug/L	24.6						
Vinyl Chloride	ug/L	20.1						
Tetrachloroethylene	ug/L	4.2						
Tetrahydrofuran	ug/L							
Methylene Chloride	ug/L							
Chloroform	ug/L	1.7						
Total Trihalomethanes (Calc.)	ug/L	1.7						
Trichloroethylene	ug/L	13.1						
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Table 5-3
EXCEEDANCES OF DEFAULT, NUMERIC SURFACE WATER PROTECTION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-19I	WT-MW-19I	WT-MW-48	WT-MW-48	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1241021	1241021	1167441	1241025	1167446	1167446	1167451
	Sample Date	09/28/2011	09/28/2011	03/22/2011	09/29/2011	03/22/2011	03/22/2011	03/22/2011
	Sample Time	13:46	13:46	12:21	14:30	11:50	11:50	11:50
	Sample Depth	23.00' - 26.0	23.00' - 26.0			16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-5	MC4052-6	M98677-21	MC4100-10	M98677-10	M98677-11	M98677-16
Constituent	Units							
Depth of Well	Ft	25.23	25.23	7.60	7.53	5.00	5.00	5.00
Depth to Water	Ft	10.85	10.85	4.99	5.43	3.37	3.37	3.37
Water Elevation	Ft	24.78	24.78	24.89	24.45	20.15	20.15	20.15
Date Metals Analyzed	-		10/01/2011	03/29/2011	10/02/2011		03/29/2011	
Date Organics Analyzed	-	10/10/2011				04/02/2011		04/02/2011
Arsenic (unfiltered)	mg/L			0.0081	0.0128		0.0068	
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L		0.0551					
Nickel (unfiltered)	mg/L							
Silver (unfiltered)	mg/L							
1,1-Dichloroethylene	ug/L					349		354
Tetrachloroethylene	ug/L	200				130		140
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Table 5-3
EXCEEDANCES OF DEFAULT, NUMERIC SURFACE WATER PROTECTION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-58	WT-MW-58
	Sample ID	1167451	1241016	1241016	1241030	1241030	1167438	1230737
	Sample Date	03/22/2011	09/28/2011	09/28/2011	09/28/2011	09/28/2011	03/21/2011	06/21/2011
	Sample Time	11:50	12:45	12:45	12:45	12:45	13:41	12:15
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M98677-17	MC4052-12	MC4052-13	MC4052-16	MC4052-17	M98644-3	MC1274-3
Constituent	Units							
Depth of Well	Ft	5.00	5.25	5.25	5.25	5.25	17.88	17.55
Depth to Water	Ft	3.37	3.37	3.37	3.37	3.37	12.13	12.32
Water Elevation	Ft	20.15	20.15	20.15	20.15	20.15	26.63	26.44
Date Metals Analyzed	-	03/29/2011		10/01/2011		10/01/2011		
Date Organics Analyzed	-		10/07/2011		10/07/2011		04/01/2011	06/27/2011
Arsenic (unfiltered)	mg/L	0.0058		0.0072		0.0072		
Cadmium (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Silver (unfiltered)	mg/L							
1,1-Dichloroethylene	ug/L		169		162			
Tetrachloroethylene	ug/L						132	280
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Table 5-3
EXCEEDANCES OF DEFAULT, NUMERIC SURFACE WATER PROTECTION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-58	WT-MW-59	WT-MW-59				
	Sample ID	1241017	1167445	1241023				
	Sample Date	09/28/2011	03/22/2011	09/29/2011				
	Sample Time	15:20	14:51	14:38				
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00				
	Laboratory	ACTM	ACTM	ACTM				
	Lab. Number	MC4052-14	M98677-9	MC4100-6				
Constituent	Units							
Depth of Well	Ft		17.77	17.83				
Depth to Water	Ft	12.15	12.60	12.39				
Water Elevation	Ft	26.61	26.24	26.45				
Date Metals Analyzed	-		03/29/2011	10/02/2011				
Date Organics Analyzed	-	10/07/2011						
Arsenic (unfiltered)	mg/L		0.0043					
Cadmium (unfiltered)	mg/L		0.291	0.336				
Copper (unfiltered)	mg/L		0.392	0.588				
Nickel (unfiltered)	mg/L		4.38	2.37				
Silver (unfiltered)	mg/L		0.0194	0.0952				
1,1-Dichloroethylene	ug/L							
Tetrachloroethylene	ug/L	286						
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Table 5-4
EXCEEDANCES OF INDUSTRIAL/COMMERICAL VOLATILIZATION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-19I	WT-MW-40	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1241021	1167437	1167446	1167451	1230738	1230747	1241016
	Sample Date	09/28/2011	03/21/2011	03/22/2011	03/22/2011	06/21/2011	06/21/2011	09/28/2011
	Sample Time	13:46	11:31	11:50	11:50	13:30	13:30	12:45
	Sample Depth	23.00' - 26.0	10.00' - 19.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-5	M98644-1	M98677-10	M98677-16	MC1274-5	MC1274-21	MC4052-12
Constituent	Units							
Depth of Well	Ft	25.23	17.77	5.00	5.00	3.42	5.05	5.25
Depth to Water	Ft	10.85	11.99	3.37	3.37	5.05	3.42	3.37
Water Elevation	Ft	24.78	20.11	20.15	20.15	18.47	20.10	20.15
Date Organics Analyzed	-	10/10/2011	04/01/2011	04/04/2011	04/04/2011	06/26/2011	06/26/2011	10/07/2011
1,1-Dichloroethylene	ug/L			349	354	30.3	43.2	169
Vinyl Chloride	ug/L	17.5	6.2	32.8	32.2	12.3	16.9	22.2
Trichloroethylene	ug/L			665	658			
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Table 5-4
EXCEEDANCES OF INDUSTRIAL/COMMERICAL VOLATILIZATION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59
	Sample ID	1241030	1167438	1230737	1241017	1167445	1230736	1241023
	Sample Date	09/28/2011	03/21/2011	06/21/2011	09/28/2011	03/22/2011	06/21/2011	09/29/2011
	Sample Time	12:45	13:41	12:15	15:20	14:51	10:35	14:38
	Sample Depth	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-16	M98644-3	MC1274-3	MC4052-14	M98677-8	MC1274-1	MC4100-5
Constituent	Units							
Depth of Well	Ft	5.25	17.88	17.55		17.77	17.60	17.83
Depth to Water	Ft	3.37	12.13	12.32	12.15	12.60	12.54	12.39
Water Elevation	Ft	20.15	26.63	26.44	26.61	26.24	26.30	26.45
Date Organics Analyzed	-	10/07/2011	04/01/2011	06/26/2011	10/07/2011	04/02/2011	06/26/2011	10/09/2011
1,1-Dichloroethylene	ug/L	162		7.3	16.8			
Vinyl Chloride	ug/L	20.0	8.7	88.4	69.9	8.9	7.7	20.1
Trichloroethylene	ug/L							
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Table 5-5
EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-19I	WT-MW-40	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1241021	1167437	1167446	1167451	1230738	1230747	1241016
	Sample Date	09/28/2011	03/21/2011	03/22/2011	03/22/2011	06/21/2011	06/21/2011	09/28/2011
	Sample Time	13:46	11:31	11:50	11:50	13:30	13:30	12:45
	Sample Depth	23.00' - 26.0	10.00' - 19.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-5	M98644-1	M98677-10	M98677-16	MC1274-5	MC1274-21	MC4052-12
Constituent	Units							
Depth of Well	Ft	25.23	17.77	5.00	5.00	3.42	5.05	5.25
Depth to Water	Ft	10.85	11.99	3.37	3.37	5.05	3.42	3.37
Water Elevation	Ft	24.78	20.11	20.15	20.15	18.47	20.10	20.15
Date Organics Analyzed	-	10/10/2011	04/01/2011	04/04/2011	04/04/2011	06/26/2011	06/26/2011	10/07/2011
1,1-Dichloroethylene	ug/L	4.3	2.1	349	354	30.3	43.2	169
Vinyl Chloride	ug/L	17.5	6.2	32.8	32.2	12.3	16.9	22.2
Trichloroethylene	ug/L	301		665	658			387

Table 5-5
EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59
	Sample ID	1241030	1167438	1230737	1241017	1167445	1230736	1241023
	Sample Date	09/28/2011	03/21/2011	06/21/2011	09/28/2011	03/22/2011	06/21/2011	09/29/2011
	Sample Time	12:45	13:41	12:15	15:20	14:51	10:35	14:38
	Sample Depth	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	MC4052-16	M98644-3	MC1274-3	MC4052-14	M98677-8	MC1274-1	MC4100-5
Constituent	Units							
Depth of Well	Ft	5.25	17.88	17.55		17.77	17.60	17.83
Depth to Water	Ft	3.37	12.13	12.32	12.15	12.60	12.54	12.39
Water Elevation	Ft	20.15	26.63	26.44	26.61	26.24	26.30	26.45
Date Organics Analyzed	-	10/07/2011	04/01/2011	06/26/2011	10/07/2011	04/02/2011	06/26/2011	10/09/2011
1,1-Dichloroethylene	ug/L	162	1.4	7.3	16.8			
Vinyl Chloride	ug/L	20.0	8.7	88.4	69.9	8.9	7.7	20.1
Trichloroethylene	ug/L	268		226				
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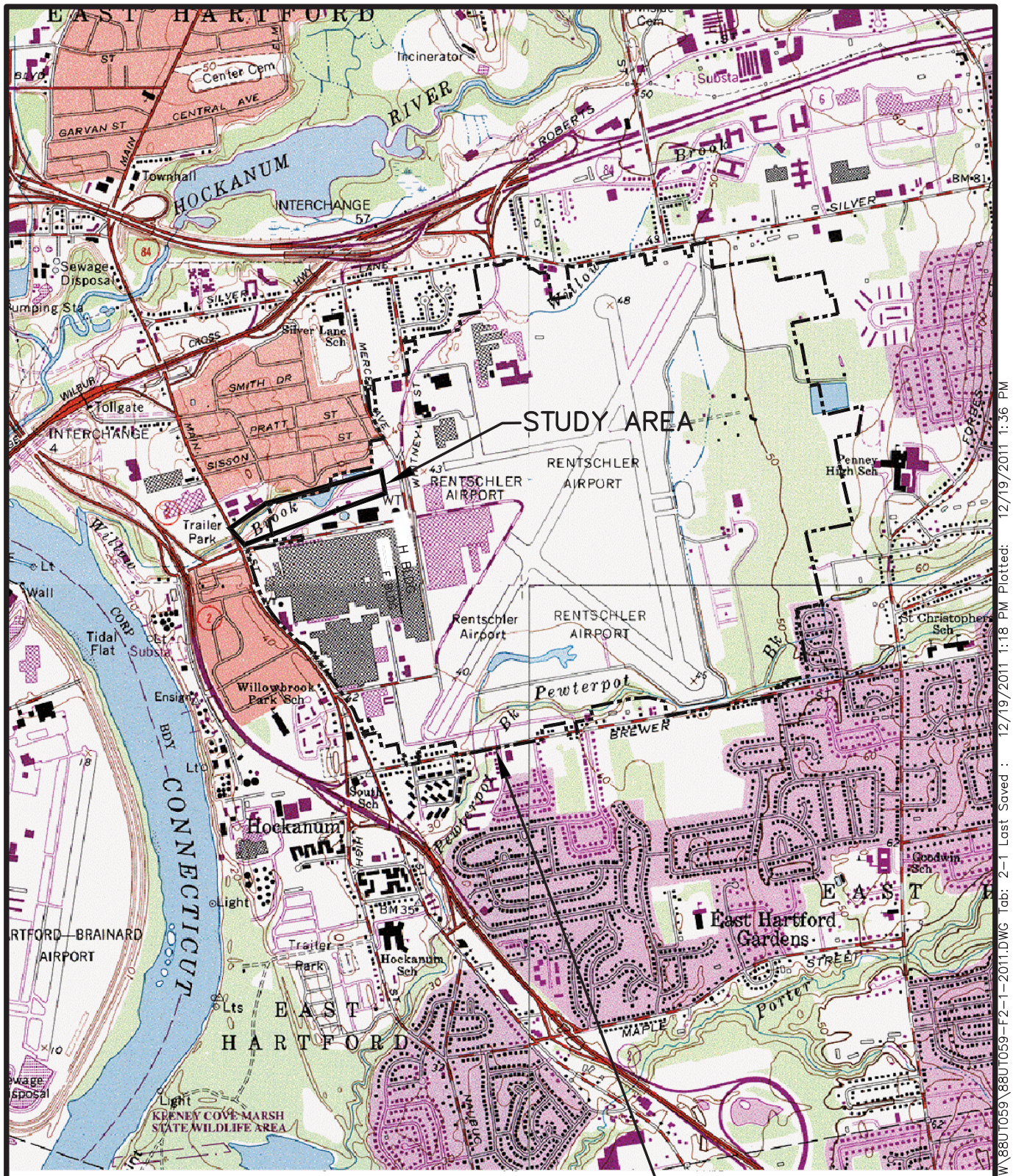
FIGURES



MAP REFERENCE:
USGS 7.5 MINUTE SERIES QUADRANGLES FOR HARTFORD NORTH, HARTFORD SOUTH, GLASTONBURY,AND MANCHESTER CONN., DATED 1964 & 1963 AND REVISED 1992.

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2011 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING PROGRAM
WILLOW BROOK & WILLOW BROOK POND – PRATT & WHITNEY, EAST HARTFORD, CT

SITE LOCATION MAP

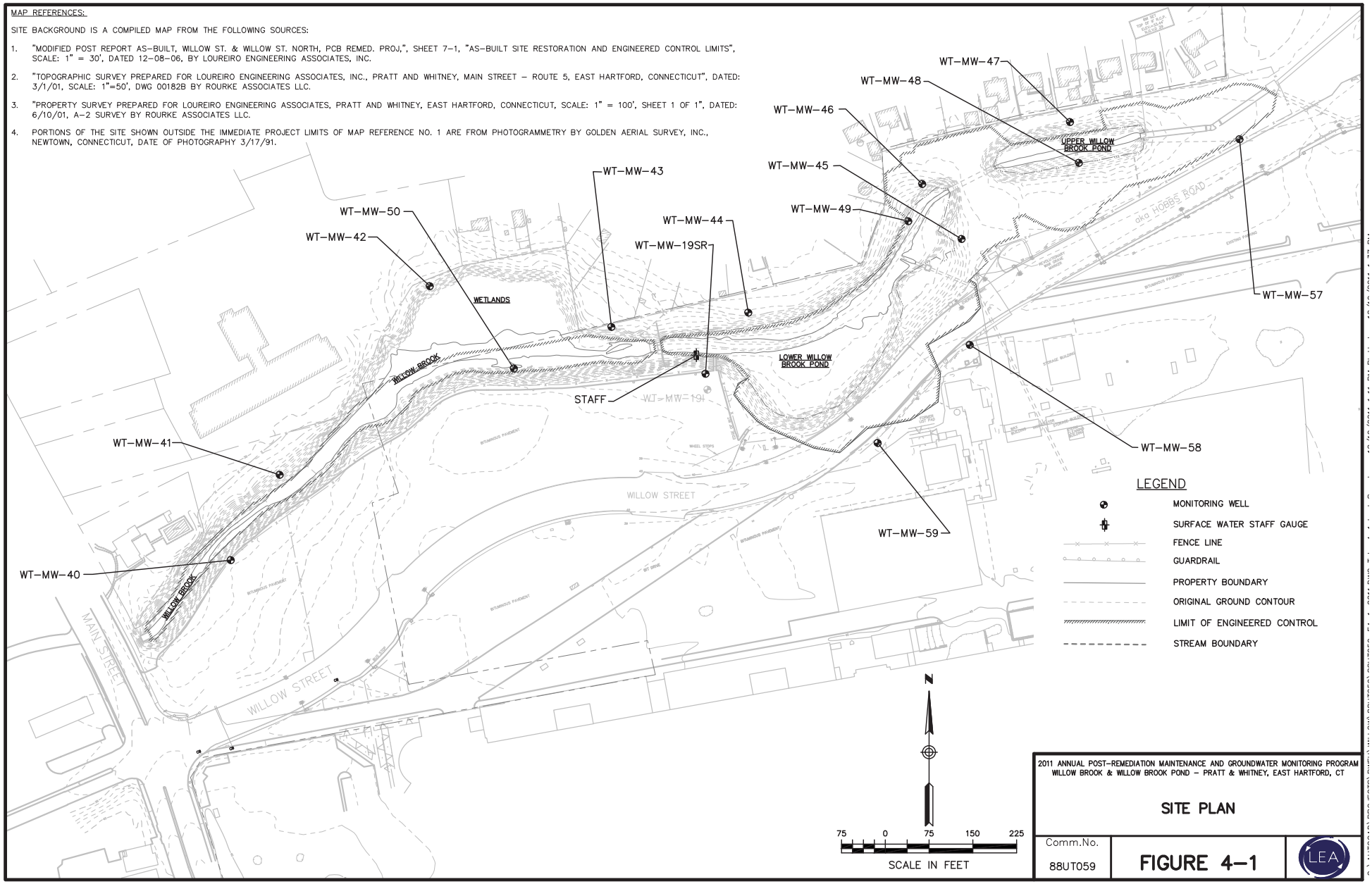
Comm.No.	FIGURE 2–1	LEA
88UT059		

G:\AUTOCAD\PROJECTS\PWEH\WILLOW\88UT059\88UT059-F2-1-2011.DWG Tab: 2-1 Last Saved : 12/19/2011 1:18 PM Plotted: 12/19/2011 1:36 PM

MAP REFERENCES:

SITE BACKGROUND IS A COMPILED MAP FROM THE FOLLOWING SOURCES:

1. "MODIFIED POST REPORT AS-BUILT, WILLOW ST. & WILLOW ST. NORTH, PCB REMED. PROJ,", SHEET 7-1, "AS-BUILT SITE RESTORATION AND ENGINEERED CONTROL LIMITS", SCALE: 1" = 30', DATED 12-08-06, BY LOUREIRO ENGINEERING ASSOCIATES, INC.
2. "TOPOGRAPHIC SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, INC., PRATT AND WHITNEY, MAIN STREET - ROUTE 5, EAST HARTFORD, CONNECTICUT", DATED: 3/1/01, SCALE: 1"=50', DWG 00182B BY ROURKE ASSOCIATES LLC.
3. "PROPERTY SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, PRATT AND WHITNEY, EAST HARTFORD, CONNECTICUT, SCALE: 1" = 100', SHEET 1 OF 1", DATED: 6/10/01, A-2 SURVEY BY ROURKE ASSOCIATES LLC.
4. PORTIONS OF THE SITE SHOWN OUTSIDE THE IMMEDIATE PROJECT LIMITS OF MAP REFERENCE NO. 1 ARE FROM PHOTOGRAMMETRY BY GOLDEN AERIAL SURVEY, INC., NEWTOWN, CONNECTICUT, DATE OF PHOTOGRAPHY 3/17/91.



2011 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING PROGRAM
WILLOW BROOK & WILLOW BROOK POND - PRATT & WHITNEY, EAST HARTFORD, CT

SITE PLAN

Comm.No. 88UT059

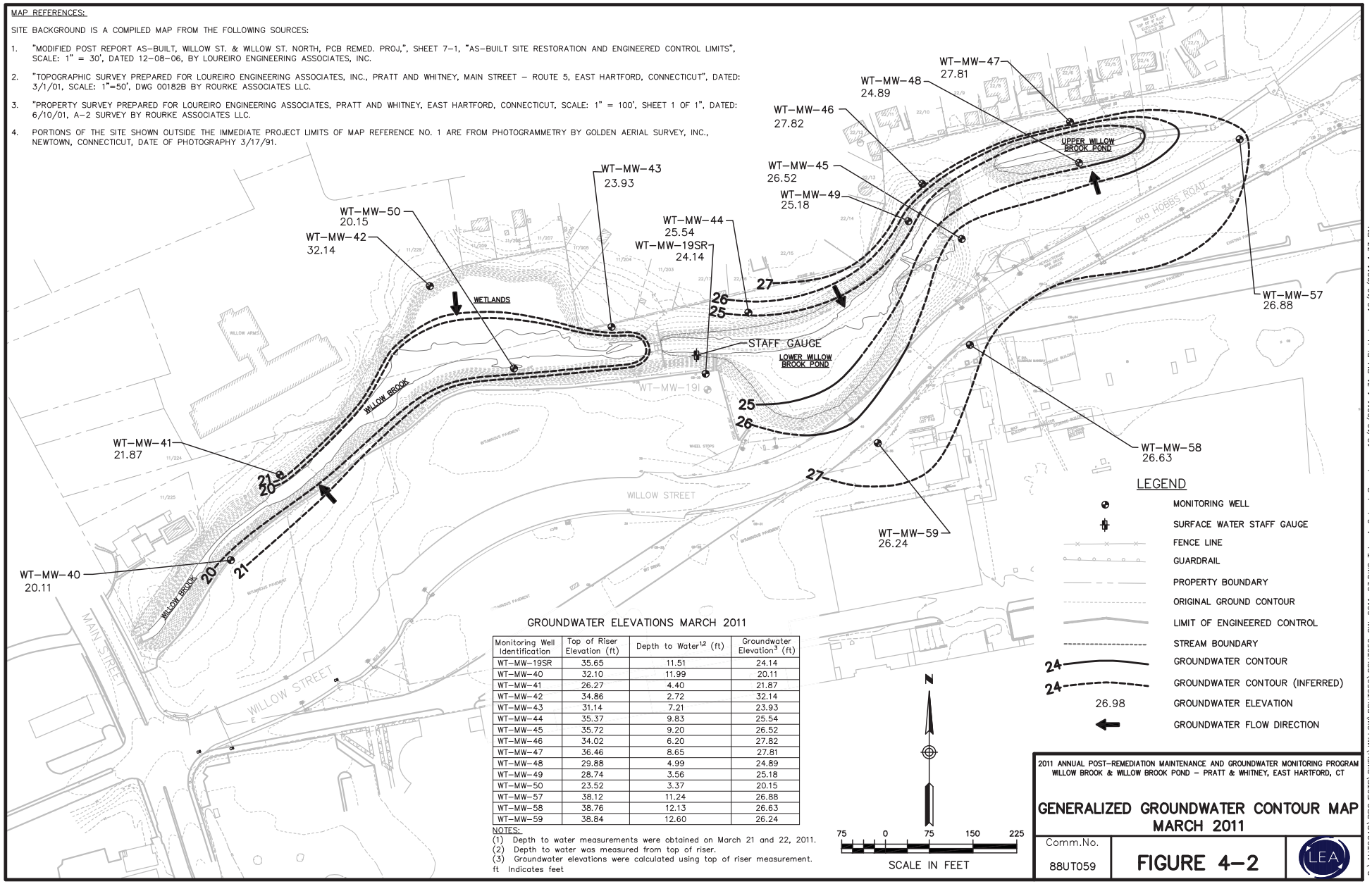
FIGURE 4-1

LEA

MAP REFERENCES:

SITE BACKGROUND IS A COMPILED MAP FROM THE FOLLOWING SOURCES:

1. "MODIFIED POST REPORT AS-BUILT, WILLOW ST. & WILLOW ST. NORTH, PCB REMED. PROJ,", SHEET 7-1, "AS-BUILT SITE RESTORATION AND ENGINEERED CONTROL LIMITS", SCALE: 1" = 30', DATED 12-08-06, BY LOUREIRO ENGINEERING ASSOCIATES, INC.
2. "TOPOGRAPHIC SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, INC., PRATT AND WHITNEY, MAIN STREET - ROUTE 5, EAST HARTFORD, CONNECTICUT", DATED: 3/1/01, SCALE: 1"=50', DWG 00182B BY ROURKE ASSOCIATES LLC.
3. "PROPERTY SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, PRATT AND WHITNEY, EAST HARTFORD, CONNECTICUT, SCALE: 1" = 100', SHEET 1 OF 1", DATED: 6/10/01, A-2 SURVEY BY ROURKE ASSOCIATES LLC.
4. PORTIONS OF THE SITE SHOWN OUTSIDE THE IMMEDIATE PROJECT LIMITS OF MAP REFERENCE NO. 1 ARE FROM PHOTOGRAMMETRY BY GOLDEN AERIAL SURVEY, INC., NEWTOWN, CONNECTICUT, DATE OF PHOTOGRAPHY 3/17/91.



GROUNDWATER ELEVATIONS MARCH 2011

Monitoring Well Identification	Top of Riser Elevation (ft)	Depth to Water[1,2] (ft)	Groundwater Elevation[3] (ft)
WT-MW-19SR	35.65	11.51	24.14
WT-MW-40	32.10	11.99	20.11
WT-MW-41	26.27	4.40	21.87
WT-MW-42	34.86	2.72	32.14
WT-MW-43	31.14	7.21	23.93
WT-MW-44	35.37	9.83	25.54
WT-MW-45	35.72	9.20	26.52
WT-MW-46	34.02	6.20	27.82
WT-MW-47	36.46	8.65	27.81
WT-MW-48	29.88	4.99	24.89
WT-MW-49	28.74	3.56	25.18
WT-MW-50	23.52	3.37	20.15
WT-MW-57	38.12	11.24	26.88
WT-MW-58	38.76	12.13	26.63
WT-MW-59	38.84	12.60	26.24

NOTES:
(1) Depth to water measurements were obtained on March 21 and 22, 2011.
(2) Depth to water was measured from top of riser.
(3) Groundwater elevations were calculated using top of riser measurement.
ft Indicates feet

2011 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING PROGRAM
WILLOW BROOK & WILLOW BROOK POND - PRATT & WHITNEY, EAST HARTFORD, CT

GENERALIZED GROUNDWATER CONTOUR MAP MARCH 2011

Comm.No. 88UT059

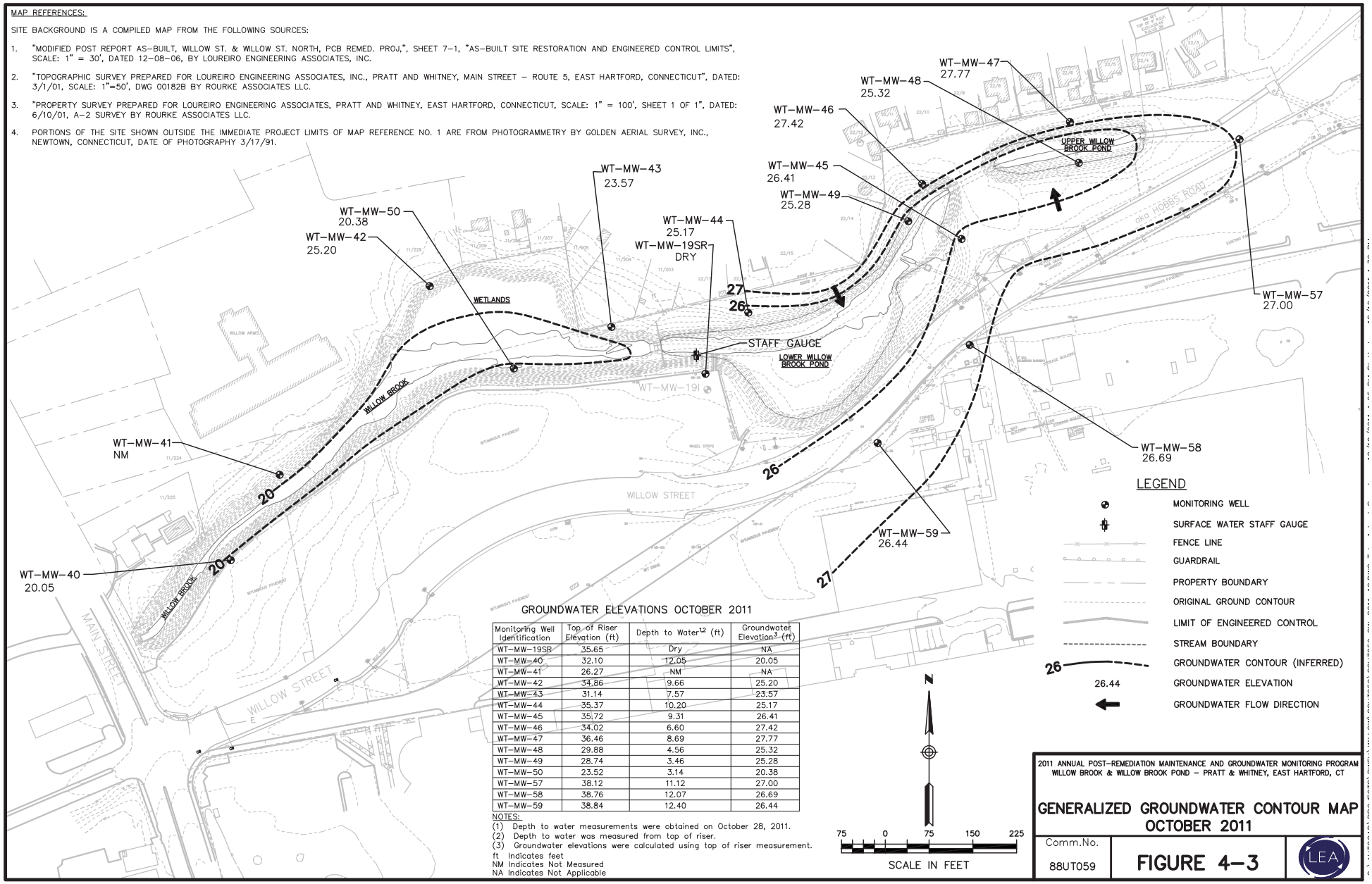
FIGURE 4-2

LEA

MAP REFERENCES:

SITE BACKGROUND IS A COMPILED MAP FROM THE FOLLOWING SOURCES:

1. "MODIFIED POST REPORT AS-BUILT, WILLOW ST. & WILLOW ST. NORTH, PCB REMED. PROJ,", SHEET 7-1, "AS-BUILT SITE RESTORATION AND ENGINEERED CONTROL LIMITS", SCALE: 1" = 30', DATED 12-08-06, BY LOUREIRO ENGINEERING ASSOCIATES, INC.
2. "TOPOGRAPHIC SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, INC., PRATT AND WHITNEY, MAIN STREET - ROUTE 5, EAST HARTFORD, CONNECTICUT", DATED: 3/1/01, SCALE: 1"=50', DWG 00182B BY ROURKE ASSOCIATES LLC.
3. "PROPERTY SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, PRATT AND WHITNEY, EAST HARTFORD, CONNECTICUT, SCALE: 1" = 100', SHEET 1 OF 1", DATED: 6/10/01, A-2 SURVEY BY ROURKE ASSOCIATES LLC.
4. PORTIONS OF THE SITE SHOWN OUTSIDE THE IMMEDIATE PROJECT LIMITS OF MAP REFERENCE NO. 1 ARE FROM PHOTOGRAMMETRY BY GOLDEN AERIAL SURVEY, INC., NEWTOWN, CONNECTICUT, DATE OF PHOTOGRAPHY 3/17/91.



GROUNDWATER ELEVATIONS OCTOBER 2011

Monitoring Well Identification	Top of Riser Elevation (ft)	Depth to Water[1,2] (ft)	Groundwater Elevation[3] (ft)
WT-MW-19SR	35.65	Dry	NA
WT-MW-40	32.10	12.05	20.05
WT-MW-41	26.27	NM	NA
WT-MW-42	34.86	9.66	25.20
WT-MW-43	31.14	7.57	23.57
WT-MW-44	35.37	10.20	25.17
WT-MW-45	35.72	9.31	26.41
WT-MW-46	34.02	6.60	27.42
WT-MW-47	36.46	8.69	27.77
WT-MW-48	29.88	4.56	25.32
WT-MW-49	28.74	3.46	25.28
WT-MW-50	23.52	3.14	20.38
WT-MW-57	38.12	11.12	27.00
WT-MW-58	38.76	12.07	26.69
WT-MW-59	38.84	12.40	26.44

NOTES:
(1) Depth to water measurements were obtained on October 28, 2011.
(2) Depth to water was measured from top of riser.
(3) Groundwater elevations were calculated using top of riser measurement.
ft Indicates feet
NM Indicates Not Measured
NA Indicates Not Applicable

2011 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING PROGRAM
WILLOW BROOK & WILLOW BROOK POND - PRATT & WHITNEY, EAST HARTFORD, CT

GENERALIZED GROUNDWATER CONTOUR MAP OCTOBER 2011

Comm.No. 88UT059

FIGURE 4-3

LEA

Appendix A

Copies of Field Paperwork

DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

LEA Comm. No.	**88UT059.001**	Page 1 of 2
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/21/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Arrived at Site 08:35 Departed from Site 5:30 Vehicle GW Van

Odometer (Start) ~60 Miles RT Return

Site Activities

	Soil Sampling		Geoprobe Work
X	Groundwater Sampling		Concrete Coring
	Surface Water Sampling		Construction
	Vapor/Air Sampling		Waste Management
	Concrete Sampling		
	Other Sampling		Inspection
	Other Sampling		Site Walk Over
			Surveying
	Well Development		Other (Describe)

Current Project Information

Last Sample Number Used	N/A
Last Location ID Used	N/A
Current Location (if not complete)	N/A
Sampling for	VOCs, CT ETPH, PCBs RCRA8, Hexchrom
Laboratories used	Accutest
Paperwork & Equipment left at/in	Office
Site Contact	Paul Iwasaki
Contractors on Site	LEA
Time and place to meet contractors	N/A

Non-productive Time

X	None		Weather
	Equipment Breakdown		Missing Equipment
	Late		Other (Describe)

Quality Assurance Checks

Yes	N/A	No	
X			Sample labels complete
X			Sample/cooler seals OK
	X		All samples obtained
X			Chains of custody
X			All forms/logs complete
X			Site condition OK
X			Site H&S Plan on site
X			Instruments calibrated

Residuals Disposition

Item	Approx. Amount	Container ID
Soil/Solid	N	A
Groundwater		~~743741~~ 777280
Decon Fluid	N	A
PPE		
Other		

Weather Conditions

Temperature 34 Precipitation Rain/snow Wind 5-7 mph

Comments

Maureen - Bill 1 Misc Tool / 2 PIDs and 2 Water Level Indicators listed below to 88UT922.001

Checked By

Robin McKinney

Expendable Items Used

Qty	Item	LEA Number
	Bailer, Disposable (specify size)	090
	Drum, Closed Top 55 Gallon	086
	Filter, In Line	024
1	Miscellaneous Health & Safety Items	060
	Tubing, 1/2", NOS	007
	Tubing, 3/8", NOS	008
2	Water, Distilled	025
70ft	Tubing 1/4" NOS	

Equipment Used

Qty	Item	LEA Number
	Generator 3500 Watt	153
	Meter, Conductivity	022
	Meter, pH/Temp	021
2	Miscellaneous Small Tools & Equipment	152
	Pump, Grundfos	073
1	Pump, Peristaltic (spec. Master or Isco)	040
RLM	Pump, Submersible	201
	Pump, Watera	038
1	Turbidimeter	023
RLM 2	VOC Analyzer, Photovac 2020 (PID)	012
3	Water Level Indicator	028
1 RLM	Water Quality Meter w/Flow Cell	070

Field Personnel Jeremy Corcoran NE HG N/A

Signature [signature]

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

Supplemental Sheet

LEA Comm. No.	**88UT059.001**	Page 2 of 87
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/21/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Description of Site Activities

08:35 Jeremy Corcoran, Nate Emmons, and Heather Grimm onsite
08:45 PreJob with Paul Iwaski
9:30 PreJob complete
9:35 Review Worklplan
9:51 Calibrate Groundwater sampling equipment (see calibration sheet)
10:05 Nate and Heather doing water levels. Jeremy is Groundwater sampling
Nate+Heather encounter oil in well CB-MW-07A- call Joe T.
Take an oil reading ~3/10' - let Joe know
Jeremy gives samples to Benny
Heather + Nate talk to Rich H. to get the key to dump waste
1745 Offsite

HG

Field Personnel Jeremy Corcoran NE — HG — N/A — Signature

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT
CALIBRATION RECORD

Date 3/21/11

LEA Comm. No.	**88UT059.001**
Project	UTC P&W Willow Brook 2011 Monitoring
Location	P&W East Hartford, East Hartford, CT
Client	Pratt & Whitney East Hartford-LL

pH Meter/Serial # 105029Q

	Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	9:51	3.99	7.00	10.04	1000	109	100%
~~Calibration Check~~			N				
Calibration Check			A				

Turbidity Meter/Serial # Hach #3522

	Time	0 NTU	20 NTU	100 NTU	800 NTU
Initial Calibration	9:57	0.29	20.9	104	809
~~Calibration Check~~	N				
Calibration Check	A				

PID Meter/Serial #

	Time	Standard	Meter Reading	Zero with
Initial Calibration				
Calibration Check				
Calibration Check				

Balance/Serial #

	Time	Standard	Balance
Initial Calibration			
Calibration Check			
Calibration Check			

Comments

Field Personnel Jeremy Corcoran HG
NE N/A

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
MISCELLANEOUS SAMPLES

LEA Comm. No. **88UT059.001**
Project UTC P&W Willow Brook 2011 Monitoring
Location P&W East Hartford, East Hartford, CT
Client Pratt & Whitney East Hartford-LL

Page 4 of 7
Date 3/21/11

Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
167452	TripBlank	10:34	BKT	N/A	N/A	Trip Blank	777280 ~~743741~~

N
A

Field Personnel Jeremy Corcoran NE — MG N/A —

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 5 of 67
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/21/11
Location	P&W East Hartford, East Hartford, CT	Sample Time ___:___
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-mw-19I Sample Number(s) 1167439 1167439UF

Initial Field Data and Measurements

Depth of Well 25.30 ~~Reference Used~~ N/A
Depth to Water 10.68 PID/FID Reading N/A
Height of Column 14.62 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 0.5 Material PVC
Protector (Road Box) Stickup
Ground to Reference TOR
Comments Water level taken prior to Low flow sampling well not large enough to fit tubing and water level indicator

General Condition	OK	Bad
Casing Secure		X needs Bolts
Collar Intact	X	
Cover Locked	N/A	
Other (describe)		

Development Information

Time \ Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
14:45	Began Purging at 150 mL/min										N/A
14:55	N/A	350	150	1.5	11.8	7.65	6.49	96.9	0.38	3.23	
15:05			150	3.0	12.5	7.46	6.46	93.8	0.26	3.14	
15:15			150	4.5	12.7	7.39	6.45	93.1	0.25	2.87	
15:25			150	6.0	12.6	7.19	6.43	92.1	0.23	2.47	
15:30			150	6.75	12.5	7.09	6.42	91.9	0.23	2.24	
15:35			150	7.50	12.5	7.16	6.41	92.2	0.23	1.76	
15:40			150	8.25	12.5	7.00	6.46	91.8	0.22	1.43	
15:41			Collect samples			well stable					

N/A

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI/methanol wipe of water level probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CT ETPH, PCBs, Hexavalent Chromium, and RCRA8, copper, nickel, zinc. Not submitted be samples were collected from MW-19SR

Field Personnel (Jeremy Corcoran) NE HG — N/A — Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 6 of 7
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3 / 21 / 11
Location	P&W East Hartford, East Hartford, CT	Sample Time 11 :31
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-mw-40 Sample Number(s) 1167437 1167437uf

Initial Field Data and Measurements

Depth of Well 17.77 Reference Used ~~N/A~~ N
Depth to Water 11.99 PID/FID Reading
Height of Column 5.78 Interface Yes / No If yes, Depth Lighter / ~~Heavier~~

Well Casing Diameter 0.5 inch Material PVC General Condition OK Bad
Protector (Road Box) / Stickup Casing Secure X needs Bolts
Ground to Reference TOR Collar Intact X
Comments Initial water level taken, tubing and water level probe will not fit inside well at same time Cover Locked N/A
Other (describe)

Development Information

Time	Parameter / Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
10:35	Began Purging at				150 mL/min						N/A
10:45	N/A	350	150	1.5	11.6	9.84	6.47	18.5	0.20	22.7	
10:55			150	3.0	11.6	9.85	6.49	-1.1	0.15	16.3	
11:05			150	4.5	11.7	9.84	6.51	-17.1	0.14	9.64	
11:15			150	6.0	11.7	9.85	6.55	-18.1	0.13	4.71	
11:20			150	6.75	11.7	9.84	6.54	-30.3	0.10	1.77	
11:25			150	7.5	11.7	9.84	6.53	-33.5	0.10	1.49	
11:30			150	8.25	11.7	9.84	6.53	-35.9	0.10	1.32	
11:31			Collect samples well is stable								

N/A

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? Methanol DI Wipe of water level Probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CTETPH, PCBs, and Total RCRA8 metals, copper, nickel, zinc

Field Personnel (Jeremy Corcoran) NE HG — N/A — *Signature* Jeremy Corcoran

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 7 of 7
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/21/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 13:41
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-58 Sample Number(s) 1167438 1167438US

Initial Field Data and Measurements

Depth of Well 17.88 ~~Reference Used~~ N
Depth to Water 12.13 PID/FID Reading
Height of Column 5.75 Interface A Yes / No If yes, Depth ~~Lighter / Heavier~~

Well Casing Diameter 1.5 Material PVC

Protector (Road Box) / Stickup
Ground to Reference LoR
Comments N/A

General Condition	OK	Bad
Casing Secure		+ needs bolts
Collar Intact	X	
Cover Locked	N/A	
Other (describe)		

Development Information

Time \ Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
12:40	Began Purging at 150 mL/min										N/A
12:50	12.33	350	150	1.5	12.2	2.22	6.17	47.9	0.75	81.2	
13:00	12.33		150	3.0	12.2	2.23	6.12	41.2	0.71	27.1	
13:10	12.33		150	4.5	12.3	2.22	6.09	36.2	0.74	17.8	
13:20	12.33		150	6.0	12.3	2.22	6.08	31.9	0.68	12.8	
13:30	12.33		150	7.5	12.3	2.24	6.08	28.1	0.70	5.27	
13:35	12.33		150	8.25	12.4	2.22	6.08	27.2	0.71	4.87	
13:40	12.33		150	9.00	12.3	2.22	6.08	25.6	0.68	4.29	
13:41	Collect samples well stable										

N/A

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI / methanol wipe of water level probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CT ETPH, PCBs, Hexavalent Chromium and RCRA 8 metals, copper, nickel, zinc

Field Personnel (Jeremy Corcoran) NE HG N/A

Signature

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #: BR1/2011-E

CLIENT INFORMATION

NAME: Robin McKinney
ADDRESS: 100 Northwest Drive
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO:
PHONE #: 860-747-6181

FACILITY INFORMATION

PROJECT NAME: Willow Brook
LOCATION: East Hartford
PROJECT NO.: 88 UTOS9.001
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	CT ETPH	PCBs 8082	RCRA 8 metals, Copper, Nickel, Zinc	Hexavalent Chromium							LAB USE ONLY
	1167437	3/21/11	11:31	JTC	GW	6	2				4	X	X	X									
	1167437UF	3/21/11	11:31	JTC	GW	1			1						X								
	1167438	3/21/11	13:41	JTC	GW	7	2				5	X	X	X		M	(RM)						
	1167438UF	3/21/11	13:41	JTC	GW	1			1						X	X							
	1167439	3/21/11	15:41	JTC	GW	7	2				5	X	X	X		X	HOLD	(RM)					
	1167439UF	3/21/11	15:41	JTC	GW	1			1						X	HOLD	(RM)						
	1167432	3/21/11	10:34	JTC	GW	1	1					X											

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Provide CT RCP Analytical data for VOCs and PCBs and Provide CT RCP report. Hex 24 hour TAT

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	3/21/11 16:35	1.	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE ____ C

3.33

PW EH Groundwater Monitoring Activities

Event Date 3-21-2011

Sampling Staff H.GRIMM/N. EMMONS

5.90
3.35

Well ID	Recent DTW	Gauged Depth to Water	Screen Interval (fbg)	Groundwater Sampling Parameters: VOCs (8260B)	Hex Chrome	PCBs	ETPH	RCRA8+Cu, Ni, Zn	NOTES
~~EG-MW-04~~	~~11.38~~		16-26						
CB-MW-04	12.30	12.30	18-28						
CB-MW-05A	12.45	~~[illegible]~~ 12.66	10-20						
CB-MW-06A	11.90	12.01	12-22						
CB-MW-07A	12.10	12.73	9.5-19.5	12.36 (OIL (TOC) to 12.67)					Substance @ top of water column - looks like amber motor oil → no motor oil small
EG-MW-04	11.38	10.52	16-26	New Plug					
EG-MW-05	11.29	9.55	16-26						
EG-MW-06R	12.67	11.22	16-26	New Cover					
EG-MW-07	13.89	12.49	16-26						
EG-MW-08	11.69	10.86	16-26						
EG-MW-09	11.88	11.03	16-26						
FB-MW-01	9.41		4-14	X		X	X	X	
FB-MW-02	8.57		4-14	X		X	X	X	
HB-MW-04	7.96		4-14	X		X	X	X	
HB-MW-05	10.08		4.8-14.8	X		X	X	X	
HB-MW-06	8.57		4-14	X		X	X	X	
HB-MW-07	9.89		5-15	X		X	X	X	
Staff Gauge	6.45	DRY 6.75'	NA						
WT-RW-001	19.63	20.10	14-24						
WT-RW-002	19.94	20.82	14-24						
WT-RW-003	19.95	19.57	14-24						
WT-RW-004	19.89	18.63	14-24						
WT-MW-04I	10.86	10.31	22-32						
WT-MW-04S	10.82	10.54	8-18						
WT-MW-05D	13.80	13.17	42-52						
WT-MW-05S	12.95	12.16	9.5-19.5						
WT-MW-07D	13.55	13.19	24-34	X	X				
WT-MW-07S	13.83	13.05	11-21	X	X				

WT
WT
WT
WT

Well ID	Recent DTW	Gauged Depth to Water	Screen Interval (fbg)	Groundwater Sampling Parameters					NOTES
				VOCs (8260B)	Hex Chrome	PCBs	ETPH	RCRA8+Cu, Ni, Zn	
WT-MW-19SR	Dry	Not found	3-12.5	X	X	X	X	X	Mud/hay bales
WT-MW-19I	11.65	10.68	23-26	X	X	X	X	X	If no GW in 19SR, Sample 19I
WT-MW-21I	14.10	13.60	22-25	X	X				
WT-MW-21S	13.63	cannot	6-15	X	X (DUP)				
WT-MW-24I	16.09	15.46	22-25	X (DUP)	X				
WT-MW-24SR	16.25	15.38	9.6-18.6	X	X				
WT-MW-25I	13.75	12.98	22-25						
WT-MW-25S	13.90	12.98	6.5-15.5						
WT-MW-31	9.27		5-14						
WT-MW-32S	12.28	11.09	7-16	X					
WT-MW-32D	12.03	10.67	17.5-20.5	X					
WT-MW-34D	11.96	10.38	15.5-18.5	X					
WT-MW-34S	11.18	10.51	7-16	X					
WT-MW-38D	12.42	11.01	17.5-20.5						
WT-MW-38S	11.76	10.25	8-17						
WT-MW-39	13.85	13.50	9-18						
WT-MW-40	11.64	11.99	10-19	X		X	X	X	
WT-MW-41	6.25	4.40	1-10						
WT-MW-42	4.45	2.81	1-10	X		X	X	X	
WT-MW-43	8.52	[illegible]	3-12						
WT-MW-44	11.22	10.4	5-14	X		X	X	X	
WT-MW-45	10.20	9.20	2.5-11.5						
WT-MW-46	7.30	6.19	-1.5-7.5	X		X	X	X	
WT-MW-47	9.88	rod stuck	6-15	X		X	X	X	
WT-MW-48	4.90	4.44	2.5-7.5	X		X	X	X	
WT-MW-49	3.66	3.50	2.5-7.5						
WT-MW-50	3.38	2.64	16-20	X	X	X	X	X	
WT-MW-51R	15.05	14.81	16-26						
WT-MW-52R	14.00	14.91	16-26						
WT-MW-53R	9.33	8.62	13.6-23.6						
WT-MW-54	11.80	11.11	16-26						
WT-MW-55	14.80	13.90	16-26						
WT-MW-56S	15.06	12.2	10.2-20.2	X					
WT-MW-57	10.95	Water	8-18	X		X	X	X	

Well ID	Recent DTW	Gauged Depth to Water	Screen Interval (fbg)	Groundwater Sampling Parameters					NOTES
				VOCs (8260B)	Hex Chrome	PCBs	ETPH	RCRA8+Cu, Ni, Zn	
WT-MW-58	13.18	12.13	8-18	X	X	X	X	X	
WT-MW-59	13.31	12.57	8-18	X	X	X	X	X	
WT-MW-60A	14.73	16.14	15.4-25.4						
WT-MW-60B	14.48	can over	26.3-31.3						
WT-MW-60C	13.35	13.45	34-39						
WT-MW-61A	14.28	~~12~~ 13.89	12.4-22.4						
WT-MW-61B	14.21	13.16	23.5-28.5						
WT-MW-61C	14.33	13.20	34.1-39.1						
WT-MW-62A	14.15	13.47	12.3-22.3						
WT-MW-62B	14.30	13.67	23.3-28.3						
WT-MW-62C	14.35	13.87	31.3-36.3						
WT-MW-63A	14.35	13.91	10-20						
WT-MW-63B	15.30	14.22	21-26						
WT-MW-63C	14.30	14.73	34-39						
WT-MW-64	14.96	14.80	16-26						
WT-PZ-01a	7.78	5.91	2-7	X					
WT-PZ-02a	6.40	6.12	1.5-6.5	X					
WT-PZ-03a	6.39	5.96	1.5-6.5	X					
WT-PZ-04a	7.89	7.61	1.5-6.5						
WT-PZ-05a	6.90	5.68	2-7						
WT-SW-01	2.21	1.76	NA						*Depth Measured from Top of Rebar
WT-SW-02	1.63	1.65	NA						*Depth Measured from Top of Rebar
WT-SW-03	3.62	3.35	NA						*Depth Measured from Top of Rebar
WT-SW-04	3.35	Missing	NA						*Depth Measured from Top of Rebar
WT-SW-05	2.05	3.33	NA						* Depth measured from Rock on bank

= Low-Flow GW Sampling NW Area GW-SW Study
= Low Flow GW Sampling Willow Pond
= Low Flow GW Sampling F&H Building

DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

Date 3/22/11

LEA Comm. No. 88UT059.001
Project UTC P&W Willow Brook 2011 Monitoring
Location P&W East Hartford, East Hartford, CT
Client Pratt & Whitney East Hartford-LL

Arrived at Site 0748 Departed from Site 1840 Vehicle GW Van 60 Miles RT
Odometer (Start) Return

Site Activities

	Soil Sampling		Geoprobe Work
X	Groundwater Sampling		Concrete Coring
	Surface Water Sampling		Construction
	Vapor/Air Sampling		Waste Management
	Concrete Sampling		
	Other Sampling		Inspection
	Other Sampling		Site Walk Over
			Surveying
	Well Development		Other (Describe)

Current Project Information

Last Sample Number Used	—
Last Location ID Used	—
Current Location (if not complete)	—
Sampling for	VOCs, ETPH, PCBs, RCRA8, copper, nickel, zinc, Mercury
Laboratories used	Accutest
Paperwork & Equipment left at/in	office
Site Contact	Paul
Contractors on Site	LEA —
Time and place to meet contractors	N/A

Non-productive Time

X	None		Weather
	Equipment Breakdown		Missing Equipment
	Late		Other (Describe)

Quality Assurance Checks

Yes	N/A	No	
+			Sample labels complete
+			Sample/cooler seals OK
	+		All samples obtained
+			Chains of custody
+			All forms/logs complete
+			Site condition OK
+			Site H&S Plan on site
+			Instruments calibrated

Checked By Robin McKinney

Residuals Disposition

Item	Approx. Amount	Container ID
Soil/Solid	N/A	
Groundwater		777280, 743741
Decon Fluid		
PPE		
Other		

Weather Conditions

Temperature 4/4 Precipitation occasional drizzle Wind 5-10mph
Comments windy and overcast

Expendable Items Used

Qty	Item	LEA Number
	Bailer, Disposable (specify size)	090
	Drum, Closed Top 55 Gallon	086
	Filter, In Line	024
1	Miscellaneous Health & Safety Items	060
2 120'	Tubing, 1/4", NOS	007
2 8'	Tubing, 3/8", NOS	008
3	Water, Distilled	025

Equipment Used

Qty	Item	LEA Number
	Generator 3500 Watt	153
	Meter, Conductivity	022
	Meter, pH/Temp	021
3	Miscellaneous Small Tools & Equipment	152
	Pump, Grundfos	073
3	Pump, Peristaltic (spec. Master or Isco)	040
	Pump, Submersible	201
	Pump, Watera	038
3	Turbidimeter	023
1	VOC Analyzer, Photovac 2020 (PID)	012
3	Water Level Indicator	028
3	Water Quality Meter w/Flow Cell	070

Field Personnel Jeremy Corcoran NE HG N/A **Signature** Jeremy Corcoran

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

Supplemental Sheet

Date 3/22/11

LEA Comm. No.	**88UT059.001**
Project	UTC P&W Willow Brook 2011 Monitoring
Location	P&W East Hartford, East Hartford, CT
Client	Pratt & Whitney East Hartford-LL

Description of Site Activities

07:48 Jeremy Corcoran onsite for low flow Groundwater sampling event. Report to security at wilgoose for Badge

07:59 Called Security to unlock gates surrounding willow Brook

08:25 Gates unlocked. Nate Emmons and Heather Grimm onsite for same sampling event

08:30 Cal Equipment (see cal sheet)

08:40 setup on a well

Joe T/Robin call Nake for sampling inside well (CB-MW-07S) to grab a sample of LNAPL in well and for sampling WT-MW-19SR, which contained water

- Jeremy samples WT-MW-19SR - keeps going dry
- Benny on-site for pickup - gets samples we have ready

17:45 - Benny offsite - Nate goes to sample CB-MW-07S, J.L. finishes well, H.G. offsite

1810 Offsite

HG

Field Personnel	Jeremy Corcoran NE	HG N/A	**Signature**

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT
CALIBRATION RECORD

LEA Comm. No.	**88UT059.001**	Page 3 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

pH Meter/Serial #

	Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	10F029Q 0830	4.01	7.00	10.01	1000	109	100%
Calibration Check	10E100237	4.01	7.00	10.01	1000	109	100%
Calibration Check	10E100236	4.01	7.00	10.01	1000	105	100%

Turbidity Meter/Serial #

	Time	0 NTU	20 NTU	100 NTU	800 NTU
Initial Calibration	~~26~~ 3522 0830	0.27	21.3	101	804
Calibration Check	3519	0.26	22.7	104	802
Calibration Check	3521	0.22	20.9	102	802

PID Meter/Serial #

	Time	Standard	Meter Reading	Zero with
Initial Calibration				
Calibration Check				
Calibration Check				

Balance/Serial #

	Time	Standard	Balance
Initial Calibration			
Calibration Check			
Calibration Check			

N/A

Comments

Field Personnel Jeremy Corcoran HG
NE — N/A — JC

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
MISCELLANEOUS SAMPLES

Date 3/22/11

LEA Comm. No. **88UT059.001**
Project UTC P&W Willow Brook 2011 Monitoring
Location P&W East Hartford, East Hartford, CT
Client Pratt & Whitney East Hartford-LL

Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1167451	WT-MW-50	11:50	DUP	N/A	N/A	N/A	743741
1167450	Trip Blank	~~08:40~~ 9:00	BKT	↓	↓	↓	↓
1167449	Equip. Blank	15:30	BKE	↓	↓	↓	↓

N/A

Field Personnel Jeremy Corcoran NE — HG N/A —

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 5 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 10:16
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-mw-57 Sample Number(s) 1167440 1167440UF

Initial Field Data and Measurements

Depth of Well 18.02 ~~Reference Used~~ N/A
Depth to Water 11.24 PID/FID Reading N/A
Height of Column 6.79 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1.5 Material PVC
Protector (Road Box) / Stickup
Ground to Reference T&R
Comments N/A

General Condition	OK	Bad
Casing Secure		X Need=Bolts
Collar Intact	X	
Cover Locked	N/A	
Other (describe)		

Development Information

Time \ Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
8:45	Began Purging at 150 mL/min										N/A
8:55	12.20	350	150	1.5	12.0	6.01	5.83	114.6	0.42	85.7	
9:05	12.20	350	150	3.0	11.7	7.60	5.74	88.7	0.30	64.2	
9:15	12.20	350	150	4.5	11.8	7.49	5.71	84.2	0.26	45.3	
9:25	12.20	350	150	6.0	11.7	7.87	5.73	78.2	0.29	22.9	
9:35	12.20	350	150	7.5	11.7	7.53	5.71	63.1	0.27	17.1	
9:45	12.20	350	150	9.0	11.8	7.58	5.71	61.3	0.26	13.2	
9:55	12.20	350	150	10.5	11.8	7.46	5.75	58.9	0.46	16.3	
10:00	12.20	350	150	11.25	11.8	7.46	5.74	55.4	0.28	14.1	
10:05	12.20	350	150	12.00	11.8	7.47	5.74	60.1	0.27	4.59	
10:10	12.20	350	150	12.75	11.8	7.47	5.74	61.3	0.27	4.27	
10:15	12.20	350	150	13.50	11.8	7.47	5.74	62.9	0.28	4.14	
10:16	Well stable collect sample										

N/A

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI/methanol wipe of water level probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CTETPH, PCBs, Total RCRA8, copper, nickel, zinc

Field Personnel (Jeremy Corcoran) NE HG N/A *Signature*

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 6 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 10:31
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-42 Sample Number(s) 1167443 1167443ut

Initial Field Data and Measurements

Depth of Well 6.77' Reference Used TOC
Depth to Water 2.72' PID/FID Reading —
Height of Column 4.05' Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1/2" Material PVC
Protector Road Box / Stickup
Ground to Reference TOC
Comments —

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	—	
Other (describe)	—	

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
940	2.72	300rpm	120	0.0	—	—	Start	purging		—	
1000	NM			2.4	7.4	248.3	5.66	93.9	6.15	4.59	
1010				3.6	7.4	199.6	5.57	90.4	6.18	2.28	
1020				4.8	7.5	202.0	5.52	87.7	6.12	1.97	
1025				5.4	7.4	203.4	5.51	86.4	6.15	1.56	
1030	NM	300rpm	120	6.0	7.5	204.4	5.50	86.8	6.15	1.72	

HG

SAMPLED

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI/Meth Wipe
Waste Container ID 177280

Additional Comments

Field Personnel H. GRIMM N. ammons J. Cocoran *Signature* Heather Grim

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 7 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 11:50
Client	Pratt & Whitney East Hartford-LL	~~1167446~~ NE 1167451 1167451uf

Monitoring Well Number WT-MW-50 Sample Number(s) 1167446 1167446uf

Initial Field Data and Measurements

Depth of Well 5.00 Reference Used Taf R
Depth to Water 3.37 PID/FID Reading NA
Height of Column 1.63 Interface Yes / (No) If yes, Depth Lighter / Heavier

Well Casing Diameter 2" Material PVC
Protector Road Box / (Stickup) 2'
Ground to Reference
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked		Pipe Cap
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
9:55	3.37	300	150								Purging
10:15	4.15		150	3.0	7.4	2446	7.19	-164.4	4.89	76.4	
10:25	4.46		100	4.0	7.5	2796	7.07	-198.4	1.56	122	
10:35	4.46		100	5.0	7.5	3207	7.11	-181.1	5.43	~~NE~~	
10:45	4.46		100	6.0	7.3	3270	7.07	-186.4	0.66	52.9	
10:55	4.46		100	7.0	6.9	3340	7.05	-194.7	0.23	23.6	
11:05			100	8.0	6.8	3426	7.04	-192.8	1.97	14.8	
11:15			100	9.0	6.6	3614	7.05	-178.2	2.29	5.57	
11:25			100	10.0	6.8	3710	7.05	-180.4	2.32	5.40	
11:35			100	11.0	6.9	3745	7.04	-176.2	2.19	5.37	
11:40			100	11.5	7.3	3754	7.05	-167.5	1.95	5.23	
11:45			100	12.0	7.5	3758	7.06	-170.2	1.87	5.28	
11:50	4.46	300	100	12.5	7.4	3750	7.06	-168.4	1.89	5.24	
	Sample										

NE

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI + Meth wipe on WLI
Waste Container ID 777280

Additional Comments with water level in well Being so Low, Tubing must Be set High enough

Field Personnel H. Grimm J. Corcoran N. Emmons **Signature** Nate Emmons

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Date 3/22/11
Project	UTC P&W Willow Brook 2011 Monitoring	Sample Time 12:21
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-48 Sample Number(s) 1167441 1167441/UF

Initial Field Data and Measurements

Depth of Well 7.60 ~~Reference Used~~ N/A
Depth to Water 4.99 PID/FID Reading N/A
Height of Column 2.61 Interface Yes / No If yes, Depth Lighter / ~~Heavier~~

Well Casing Diameter 2 Material PVC

Protector Road Box / Stickup
Ground to Reference TOR
Comments N/A

General Condition	OK	Bad
Casing Secure	X	
Collar Intact	X	
Cover Locked	X	
Other (describe)	N/A	

Development Information

Time \ Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:15	Began purging at 150 mL/min										N/A
11:25	5.58	350	150	1.5	7.0	0.612	6.34	6.7	0.19	69.4	
11:35	5.55		150	3.0	7.0	0.610	6.37	-15.4	0.14	47.5	
11:45	5.55		150	4.5	7.0	1.40	6.44	-23.6	0.19	31.7	
11:55	5.55		150	6.0	7.0	0.643	6.42	-38.3	0.12	26.4	
12:05	5.55		150	7.5	7.0	0.667	6.47	-44.9	0.12	10.09	
12:10	5.55		150	8.25	7.0	0.686	6.48	-55.6	0.11	4.99	
12:15	5.55		150	9.00	7.0	0.684	6.49	-59.4	0.11	4.64	
12:20	5.55		150	9.75	7.0	0.691	6.51	-62.3	0.12	4.43	
12:21	Well stable collect sample										

N/A

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI/Methanol wipe of water level probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CT ETPH, PCBs, Total RCRA 8, copper, nickel, zinc

Field Personnel Jeremy Corcoran JC HG N/A *Signature*

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Date 3/22/2011
Project	UTC P&W Willow Brook 2011 Monitoring	Sample Time 12:31
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-44 Sample Number(s) 1167444 1167444uf

Initial Field Data and Measurements

Depth of Well 13.59' Reference Used TOC
Depth to Water 9.83' PID/FID Reading
Height of Column 3.76' Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1/2" Material PVC
Protector Road Box / Stickup
Ground to Reference TOC
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	—	
Other (describe)	—	

Development Information

Parameter / Time	Depth to Water	Pump Setting (rpm)	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1130	9.83	300	150	0.0			start purging				
1150	NM			3.0	10.1	376.3	5.78	69.4	5.59	0.87	
1200	NM			4.5	10.3	379.3	5.77	66.3	5.42	0.75	
1210	NM			6.0	8.9	386.6	5.78	64.1	5.56	1.13	
1220	NM			7.5	10.2	393.0	5.78	64.0	5.33	0.4	
1225	NM			8.25	10.3	391.8	5.77	63.2	5.32	0.77	
1230	NM	300	150	9.0	10.4	392.2	5.77	64.0	5.33	0.93	
											SAMPLED

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI/Meth Wipe
Waste Container ID 777280

Additional Comments

Field Personnel H. GRIMM, N. EMMONS, J. COCOLAS

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 10 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 14:26
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-mw-47 Sample Number(s) 1167442 1167442UF

Initial Field Data and Measurements

Depth of Well 14.45 Reference Used N/A
Depth to Water 8.65 PID/FID Reading
Height of Column 5.80 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 0.5 Material PVC
Protector (Road Box) / Stickup
Ground to Reference TOR
Comments Initial water level taken well too small to house tubing and waterlevel probe

General Condition	OK	Bad
Casing Secure		X Needs Bolts
Collar Intact	X	
Cover Locked	N/A	
Other (describe)		

Development Information

Time \ Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13:45	Began purging at 150 mL/min										N/A
13:55	N/A	350	150	1.5	9.5	0.362	5.58	90.9	4.92	21.9	
14:05			150	~~3.5~~ 3.0	9.8	0.373	5.57	94.9	5.27	6.16	
14:15			150	4.5	9.8	0.376	5.56	101.4	5.21	1.62	
14:20			150	5.25	9.8	0.376	5.56	102.2	5.24	1.43	
14:25			150	6.0	9.8	0.376	5.56	102.8	5.20	1.24	
14:26	well stabe collect sample.										

N/A

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI/methanol wipe of water level probe
Waste Container ID 743741

Additional Comments Sampled for VOCs, CT ETPH, PCBs, Total RCRA 8, copper, nickel, zinc

Field Personnel Jeremy Coscoran NL HG N/A **Signature**

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 11 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 14:30
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-195R Sample Number(s) 1167447 1167447vf

Initial Field Data and Measurements

Depth of Well ~~12~~ 11.8 Reference Used Taf R
Depth to Water 11.51 PID/FID Reading ~~NA~~
Height of Column .29" Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1.5 Material PVC
Protector (Road Box) / Stickup
Ground to Reference
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
14:30	11.51	300	100	0	8.8	7467	6.95	-20.5	6.50	9.34	
Dry											

NC

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what?
Waste Container ID 777280

Additional Comments Called Joe T. + R. McKinney, They wanted to sample what I could get out of the well.

Field Personnel

Signature Nathan Emmons

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 12 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 14:51
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-59 Sample Number(s) 1167445 1167445uf

Initial Field Data and Measurements

Depth of Well 17.77' Reference Used TOC
Depth to Water 12.60' PID/FID Reading 0.0
Height of Column 5.17' Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1.5" Material PVC

Protector Road Box / Stickup
Ground to Reference TOC
Comments —

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	—	
Other (describe)	—	

Development Information

Parameter / Time	Depth to Water	Pump Setting (rpm)	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1345				0.0		Start purging					
1405	12.88	300	100	2.0	11.7	16015	6.13	62.5	6.31	45.0	
1415	12.88	↓	↓	3.0	11.9	16049	6.14	68.9	4.33	21.2	
1425	12.90			4.0	12.2	16522	6.15	63.2	0.63	11.9	
1435	12.88			5.0	12.2	16321	6.15	63.3	0.90	5.96	
1440	12.92			5.5	12.2	16428	6.15	68.8	1.20	5.28	
1445	12.92			6.0	12.1	16280	6.16	65.0	1.26	3.63	
1450	12.92	300	100	6.5	12.0	16416	6.15	65.8	NM	NM	

HG

SAMPLED

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI/Meth wipe
Waste Container ID 777280

Additional Comments

Field Personnel H. GRIMM N. EMMONS J. COLORON Signature [signature]

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 13 of 13
Project	UTC P&W Willow Brook 2011 Monitoring	Date 3/22/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 15:15
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-46 Sample Number(s) 1167448 1167448uf

Initial Field Data and Measurements

Depth of Well 12.65 Reference Used TofR
Depth to Water 6.20 PID/FID Reading ~~NA~~
Height of Column 6.45 Interface Yes / (No) If yes, Depth Lighter / Heavier

Well Casing Diameter .5" Material PVC
Protector (Road Box) / Stickup
Ground to Reference
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
3/15:15	6.20	300	100	0							Purging
15:25				1	9.0	290.3	7.83	-27.3	7.84	3.67	
15:35				2	9.1	264.8	7.57	-8.9	6.74	3.05	
15:45				3	9.1	257.3	7.49	-1.8	6.95	2.46	
15:55	NC			4	9.2	249.6	7.41	12.9	6.04	2.10	
16:05				4.5	9.2	250.3	7.38	13.4	6.10	1.87	
16:10				5	9.2	251.0	7.38	13.2	6.06	1.70	
16:15		300	100	5.5	9.2	249.3	7.37	13.6	6.08	1.65	
Sample											

NC

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / (No) If Yes, with what?
Waste Container ID 777280

Additional Comments

Field Personnel Nate E, Heather G, Jeremy C

Signature Nate Emmons

1 of 13

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY: Plainville STATE: CT ZIP: 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook Soil Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88U059.001
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	RCRA & Metals (Cu, Ni, Zn)	Hexavalent Chromium							LAB USE ONLY
	1167450	3/22/11	900	JC	GW	2	X					X	X											
	1167449	3/22/11	1530	JC		3	X					X	X											
	1167449		1530	JC		5						X		X	X		~~X~~	RM						
	1167449uf		1530	JC		1			X			X				X	X							
	1167443		1031	HG		3	X					X	X											
	1167443		1031	HG		4						X		X	X									
	1167443uf		1031	HG		1			X			X				X								
	1167444		1231	HG		3	X					X	X											
	1167444		1231	HG		4						X		X	X									
	1167444uf		1231	HG		1			X			X				X								
	1167445	3/22/11	1451	HG	GW	3	X					X	X											

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER _____

APPROVED BY: _____

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY) _____

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	3/22/11 1700	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE _____ C

2 of 13

ACCUTEST Laboratories

CHAIN OF CUSTODY

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MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO: Ryan McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 201 Monitoring
LOCATION: Hartford, CT
PROJECT NO.: 880059.001
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	Read analytical on NJ	Hexavalent Chrom.							LAB USE ONLY
·	1167445	3/22/11	1451	HG	GW	5						X		X	X		X (RM)							
·	1167445uf		1451	HG		1			X			X				X	X							
·	1167446		1150	JVE		3	X					X	X											
·	1167446		1150	JVE		5						X		X	X		X (RM)							
·	1167446uf		1150	JVE		1			X			X				X	X							
·	1167447		1430	NE		3	X					X	X											
·	1167447		1430	NE		5						X		X	X		X (RM)							
·	1167447uf		1430	NE		1			X			X				X	X							
·	1167448		1515	NE		3	X					X	X											
·	1167448		1515	NE		4						X		X	X									
·	1167448uf	3/22/11	1515	NE	GW	1			X			X				X								

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

Please provide CT RCP analytical list for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	3/22/11 1700	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE ____ C

3 of 4

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88UT059 001
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	RCRA 8 metals + Cu, Ni, Zn	Hexavalent Cr							LAB USE ONLY
	1167451	3/22/11		NE	GW	3	X					X	X											
	1167451			NE		5						X		X	X		~~X~~	(EM)						
	1167451uf			NE		1			X			X				X	X							
	1167442		1426	JC		3	X					X	X											
	1167442		1426	JC		5						X		X	X									
	1167442uf		1426	JC		1			X			X				X								
	1167441		1221	JC		3	X					X	X											
	1167441		1221	JC		4						X		X	X									
	1167441uf		1221	JC		1			X			X				X								
	1167440		1016	JC		3	X					X	X											
	1167440	3/22/11	1016	JC	GW	4						X		X	X									

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER _____

APPROVED BY: _____

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY) _____

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Heather Sim	3/22/11 1700	1. B. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE _____ C

4 of 4

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CEN[illegible] WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates
ADDRESS: 100 Northwest Drive
CITY, STATE ZIP: Plainville, CT 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88UT059.001
FAX #: 4

ANALYTICAL INFORMATION

RCRA 8 Metals Co, Ma

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	[illegible]	RCRA 8 Metals Co, Ma	LAB USE ONLY
	1167440ut	3/22/11	1016	JC	GW	1			X			X	X	

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER _____

APPROVED BY: _____

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY) _____

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Heather [illegible]	3/22/11 1700	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE _____ C

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

LEA Comm. No.	**88UT059.001**	Page 1 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Arrived at Site 0820 Departed from Site 1600 Vehicle ST-12

Odometer (Start) Return 65 miles

Site Activities

- [ ] Soil Sampling
- [x] Groundwater Sampling
- [ ] Surface Water Sampling
- [ ] Vapor/Air Sampling
- [ ] Concrete Sampling
- [ ] Other Sampling
- [ ] Other Sampling
- [ ] Well Development
- [ ] Geoprobe Work
- [ ] Concrete Coring
- [ ] Construction
- [ ] Waste Management
- [ ] Inspection
- [ ] Site Walk Over
- [ ] Surveying
- [ ] Other (Describe)

Current Project Information

Last Sample Number Used	
Last Location ID Used	
Current Location (if not complete)	
Sampling for	Cr⁶, metals, VOCs, PCBs, TPH
Laboratories used	Aculist
Paperwork & Equipment left at/in	Joe Trashi
Site Contact	Paul Iwasaki
Contractors on Site	LEA
Time and place to meet contractors	

Non-productive Time

- [x] None
- [ ] Equipment Breakdown
- [ ] Late
- [ ] Weather
- [ ] Missing Equipment
- [ ] Other (Describe)

Quality Assurance Checks

Yes	N/A	No	
✓			Sample labels complete
	✓		Sample/cooler seals OK
✓			All samples obtained
✓			Chains of custody
✓			All forms/logs complete
✓			Site condition OK
✓			Site H&S Plan on site
✓			Instruments calibrated

Residuals Disposition

Item	Approx. Amount	Container ID
Soil/Solid		
Groundwater	≈ 15 gals	795372
Decon Fluid		
PPE		
Other		

Weather Conditions

Temperature 72° Precipitation showers Wind light

Comments

Checked By

Expendable Items Used

Qty	Item	LEA Number
	Bailer, Disposable (specify size)	090
	Drum, Closed Top 55 Gallon	086
	Filter, In Line	024
1	Miscellaneous Health & Safety Items	060
120'	Tubing, ~~1/2"~~, NOS 1/4" poly	007
6'	Tubing, ~~3/8"~~, NOS silicone tubing	008
	Water, Distilled	025

Equipment Used

Qty	Item	LEA Number
	Generator 3500 Watt	153
	Meter, Conductivity	022
	Meter, pH/Temp	021
1	Miscellaneous Small Tools & Equipment	152
	Pump, Grundfos	073
4	Pump, Peristaltic (spec. Master or Isco)	040
	Pump, Submersible	201
	Pump, Watera	038
2	Turbidimeter	023
	VOC Analyzer, Photovac 2020 (PID)	012
~~3~~ 4	Water Level Indicator	028
4	Water Quality Meter w/Flow Cell	070

Field Personnel Alex Clarke ~~Jeremy Corcoran~~ Dennis Ryder

Signature

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

Supplemental Sheet

LEA Comm. No.	**88UT059.001**	Page 2 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Description of Site Activities

0650. A. Clarke onsite
0725. arrive @ office to drop off paperwork & pick up Willow Pond PE samples
0820. onsite @ Pratt EH
- get inspected
0835. contact Pratt security to open Gate WB-1
- begin equipment, bottle setup & calibrations
0850. WB-1 Gate open
0925. Finish locating remaining wells in thick brush
Setup on WT-MW-46
1000. Dennis Ryder onsite
- D Ryder begins setup on WT-MW-57
1300. A. Clarke finishes sampling WT-MW-47
moves into 3 Drum to setup on WT-MW-59
1550. Accelest onsite to pickup samples
1600. off site
1630. leave yard

Field Personnel Alex Clarke
Jeremy Corcoran
Dennis Ryder

Signature

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT
CALIBRATION RECORD

LEA Comm. No.	**88UT059.001**	Page 3 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

pH Meter/Serial #

		Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	10D01438	0845	4.00	7.00	10.00	1000	100	101%
Calibration Check	10D01383	0845	4.00	7.00	10.00	1000	100	99.8%
Calibration Check								

Turbidity Meter/Serial #

	Time	0 NTU	~~20~~ 10 NTU	100 NTU	800 NTU
Initial Calibration	0850	0.00	10.1		
Calibration Check	0850	0.00	9.8		
Calibration Check					

PID Meter/Serial #

	Time	Standard	Meter Reading	Zero with
Initial Calibration				
Calibration Check				
Calibration Check				

Balance/Serial #

	Time	Standard	Balance
Initial Calibration			
Calibration Check			
Calibration Check			

Comments

Field Personnel: Alex Clarke, Jeremy Corcoran

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
MISCELLANEOUS SAMPLES

LEA Comm. No.	**88UT059.001**	Page 4 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1241027		1000	BRTC			Trip Blank	

Field Personnel: Alex Clarke, ~~Jeremy Corcoran~~, Dennis Ryder

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
MISCELLANEOUS SAMPLES

LEA Comm. No. **88UT059.001**
Project UTC P&W Willow Brook 2011 Monitoring
Location P&W East Hartford, East Hartford, CT
Client Pratt & Whitney East Hartford-LL

Date 9/28/11

Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1241367	PE	1120	PE	—	—	VOCs, PCBs	
1241367F	PE	1120	PE	—	—	metals	
1241368	PE	1150	PE	—	—	ETPH	

Field Personnel Joe Trzaski
A Clarke

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 6 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 1020
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-46 Sample Number(s) 1241018 1241018uf

Initial Field Data and Measurements

Depth of Well 12.65 Reference Used top of pvc riser
Depth to Water 6.63 PID/FID Reading NM
Height of Column 6.02 Interface Yes (No) If yes, Depth _____ Lighter / Heavier

Well Casing Diameter 1/2" Material pvc
Protector Road Box / Stickup
Ground to Reference
Comments tubing intake set @ 9'

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0935	6.63	300	140	0	←		start purging				→
0945	NA	300	140	1.4	18.0	379.5	6.09	164.0	3.96	36.4	
0950	NA	300	140	2.0	18.1	389.1	5.87	185.6	3.75	15.6	
0955	NA	300	140	2.8	18.2	389.9	5.87	186.7	3.73	7.43	
1005	NA	300	140	4.2	18.4	385.1	5.84	200.4	3.59	4.49	
1010	NA	300	140	4.9	18.3	385.4	5.84	200.7	3.64	4.31	
1015	NA	300	140	5.6	18.2	385.4	5.84	200.6	3.61	4.36	
1020	NA	300	140	6.3	18.4	385.3	5.83	201.0	3.61	4.21	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI, Methanol wipe Rinse w/ DI
Waste Container ID 785372

Additional Comments

Field Personnel Alex Clarke, ~~Jeremy Corcoran~~ *Signature*

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 7 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 12:10
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-57 Sample Number(s) 1241022 1241022-f

Initial Field Data and Measurements

Depth of Well 18.09 Reference Used Top of Riser
Depth to Water ~~11.61~~ 11.48 PID/FID Reading NA
Height of Column 6.61 Interface Yes / (No) If yes, Depth — Lighter / Heavier

Well Casing Diameter 2" Material PVC
Protector (Road Box) / Stickup
Ground to Reference —
Comments —

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)	—	

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
10:50	11.48	300	100	0							Initial
11:00	11.48	300	100	1	20.0	1621	6.43	13.3	1.05	192	
11:05	11.59	300	100		20.2	1836	6.27	11.1	0.95	127	
11:10	11.61	300	100		20.3	1912	6.20	8.81	0.65	89.5	
11:15	11.61	300	100		20.3	1956	6.20	4.91	0.51	53.4	
11:20	11.61	300	100		20.2	1981	6.19	2.8	0.33	36.9	
11:25	11.61	300	100		20.3	2001	6.17	1.1	0.28	28.9	
11:30	11.61	300	100		20.3	2003	6.17	0.4	0.20	23.5	
11:35	11.61	300	100		20.3	2010	6.17	0.6	0.16	12.9	
11:40	11.61	300	100		20.3	2012	6.16	0.4	0.14	10.1	
11:45	11.61	300	100		20.3	2014	6.16	0.4	0.12	8.61	
11:50	11.61	300	100		20.2	2016	6.17	0.4	0.10	10.4	
11:55	11.61	300	100		20.3	2018	6.17	0.6	0.10	7.60	
12:00	11.61	300	100		20.3	2018	6.16	0.4	0.09	6.49	
12:05	11.61	300	100		20.3	2019	6.16	0.4	0.08	5.43	
12:10	11.61	300	100	8.0	20.3	2019	6.16	0.4	0.08	3.98	SAMPLE

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other —

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? Liquinox, DI
Waste Container ID 795372

Additional Comments Tubing set @ 16.9'

Field Personnel Alex Clarke, ~~Jeremy Corcoran~~ Dennis Ryder *Signature*

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 8 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 1438
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-59 Sample Number(s) 1241023 1241023

Initial Field Data and Measurements

Depth of Well 17.83 Reference Used top of pvc riser
Depth to Water 12.39 PID/FID Reading NM
Height of Column 5.44 Interface Yes (No) If yes, Depth Lighter / Heavier

Well Casing Diameter 1.5" Material pvc
Protector (Road Box) / Stickup
Ground to Reference
Comments tubing intake set @ 15'

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	no lock	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1340	12.39	300	140	0	←	start purging					→
1345	12.44	300	140	.70	20.8	6479	6.70	105.1	1.25	260	
1400	12.44	300	140	1.4	21.0	12120	6.65	69.7	.64	50	
1415	12.44	300	140	3.5	20.5	15380	6.59	68.3	.53	15	
1425	12.45	300	140	4.9	20.7	16278	6.58	62.8	.58	6.2	
1430	12.45	300	140	7	20.7	16346	6.59	62.8	.75	4.8	
1435	12.45	300	140	7.7	20.7	16347	6.58	62.3	.75	4.2	
1438	12.45	300	140	8.1	20.6	16347	6.58	62.3	.75	4.8	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI, Methanol wipe between wells.
Waste Container ID 795372

Additional Comments Initial purge water extremely turbid.

Field Personnel Alex Clarke, ~~Jeremy Corcoran~~, Dennis Ryder *Signature*

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 9 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	Sample Time ~~1215~~ 1220
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-47 Sample Number(s) 1241024 1241024uf

Initial Field Data and Measurements

Depth of Well 14.37 Reference Used top of pvc riser
Depth to Water 8.78 PID/FID Reading NA
Height of Column 5.59 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1/2" Material pvc
Protector Road Box / Stickup
Ground to Reference
Comments tubing intake set @ 11.5'

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1130	8.78	300	140	0	← Start purging →						
1140	NA	300	140	1.4	19.0	222.5	5.70	220.9	2.24	1.8	
1150	NA	300	140	2.8	18.9	226.1	5.82	199.8	2.48	1.2	
1200	NA	300	140	4.2	19.0	226.0	5.81	200.1	2.51	0.8	
1210	NA	300	140	5.6	19.1	225.9	5.81	200.5	2.55	0.9	
1215	NA	300	140	6.3	19.0	226.2	5.81	200.7	2.55	0.5	
1220	NA	300	140	7	19.0	226.1	5.81	200.5	2.55	0.6	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI, Methanol wipe, DI rinse
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke Dennis Ryder ***Signature***
~~Jeremy Corcoran~~

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 10 of 10
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/29/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 14:30
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-48 Sample Number(s) 1241025 1241025-f

Initial Field Data and Measurements

Depth of Well 7.53 Reference Used Top of Riser
Depth to Water 5.43 PID/FID Reading NA
Height of Column 2.10 Interface Yes / (No) If yes, Depth — Lighter / Heavier

Well Casing Diameter 2" Material PVC
Protector Road Box (Stickup)
Ground to Reference 11.3"
Comments Stickup is on rock slope

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)	—	

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13:40	5.43	300	100								Initial
14:00	5.49	300	100	1	20.2	742	6.63	98.7	0.45	95.4	
14:05	5.51	300	100		19.9	781	6.67	97.4	0.31	36.9	
14:10	5.51	300	100		19.9	811	6.69	96.8	0.35	11.4	
14:15	5.51	300	100		19.9	839	6.69	92.3	0.29	7.99	
14:20	5.51	300	100		19.8	841	6.69	90.4	0.26	6.54	
14:25	5.51	300	100		19.9	849	6.70	94.3	0.11	4.89	
14:30	5.51	300	100	5.0	19.8	853	6.69	93.7	0.09	3.16	SAMPLE

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other —

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? Liquinox, DI
Waste Container ID 795372

Additional Comments Tubing set @ 6.5'

Field Personnel Alex Clarke, ~~Jeremy Corcoran~~ Dennis Ryder *Signature*

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 2

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #:

Client / Reporting Information

Company Name: Lanieri Engineering Associates
Street Address: 100 Northwest Drive
City State Zip: Plainville, CT 06062
Project Contact: Joe Trasko jtrasko@lanieri.com
E-mail:
Phone #: 860-747-6181
Fax #:
Sampler(s) Name(s):
Phone #:

Project Information

Project Name: (UTC Pow Willow Pond GW)
Street:
City: East Hartford, CT
Project#:
Client PO#:
Project Manager: Adam Dubray

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB- Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Volatile 8260	PCBs by 8082	CT ETPH	Filtered Metals			LAB USE ONLY
	1241018		9-29-11	1020		GW	6	2				4					X	X	X				
	1241018uf			1020		GW	1			1										X			
	1241022			1210	DR	GW	6	2				4					X	X	X				
	1241022uf			1210	DR	GW	1			1										X			
	1241023			1430	DR	GW	7	2				5					X	X	X		M (KM)		
	1241023uf			1430	DR	GW	1			1										X	X		
	1241024			1220		GW	6	2				4					X	X	X				
	1241024uf			1220		GW	1			1										X			
	1241025			1438		GW	6	2				4					X	X	X				
	1241025uf			1438		GW	1			1										X			
	1241027		9-29-11	1000		GW	1	1									X						

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format LEA
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Please provide RCP (CT) Deliverable
list for VOCs & PCBs

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	9-29-11 1600	1	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [ ] Cooler Temp.

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

LEA Comm. No.	**88UT059.001**	Page 1 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Arrived at Site 0815 Departed from Site 1645 Vehicle ST-12, personal (Nate E)

Odometer (Start) Return 60 miles

Site Activities

- [ ] Soil Sampling
- [x] Groundwater Sampling
- [ ] Surface Water Sampling
- [ ] Vapor/Air Sampling
- [ ] Concrete Sampling
- [ ] Other Sampling
- [ ] Other Sampling
- [ ] Well Development
- [ ] Geoprobe Work
- [ ] Concrete Coring
- [ ] Construction
- [ ] Waste Management
- [x] Inspection Cap
- [ ] Site Walk Over
- [ ] Surveying
- [ ] Other (Describe)

Current Project Information

Last Sample Number Used	
Last Location ID Used	
Current Location (if not complete)	
Sampling for	Cr6, metals, VOCs, PCBs, TPH
Laboratories used	Accutest
Paperwork & Equipment left at/in	Joe Trasin
Site Contact	Paul Iwasaki
Contractors on Site	LEA

Non-productive Time

- [x] None
- [ ] Equipment Breakdown
- [ ] Late
- [ ] Weather
- [ ] Missing Equipment
- [ ] Other (Describe)

Time and place to meet contractors

Quality Assurance Checks

Yes	N/A	No	
✓			Sample labels complete
	✓		Sample/cooler seals OK
✓			All samples obtained
✓			Chains of custody
✓			All forms/logs complete
✓			Site condition OK
✓			Site H&S Plan on site
✓			Instruments calibrated

Residuals Disposition

Item	Approx. Amount	Container ID
Soil/Solid		
Groundwater	≈ 15 gals	795372
Decon Fluid		
PPE		
Other		

Weather Conditions

Temperature 75° Precipitation — Wind light

Comments

Checked By JT

Expendable Items Used

Qty	Item	LEA Number
	Bailer, Disposable (specify size)	090
	Drum, Closed Top 55 Gallon	086
	Filter, In Line	024
1	Miscellaneous Health & Safety Items	060
150'	Tubing, ~~1/2"~~, NOS 1/4" poly	007
7'	Tubing, ~~3/8"~~, NOS silicone tubing	008
	Water, Distilled	025

Equipment Used

Qty	Item	LEA Number
	Generator 3500 Watt	153
	Meter, Conductivity	022
	Meter, pH/Temp	021
1	Miscellaneous Small Tools & Equipment	152
	Pump, Grundfos	073
4	Pump, Peristaltic (spec. Master or Isco)	040
	Pump, Submersible	201
	Pump, Watera	038
2	Turbidimeter	023
1	VOC Analyzer, Photovac 2020 (PID)	012
3	Water Level Indicator	028
4	Water Quality Meter w/Flow Cell	070

Field Personnel Alex Clarke ~~Jeremy Corcoran~~ Nate Emmons *Signature*

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT

Supplemental Sheet

LEA Comm. No.	**88UT059.001**	Page 2 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Description of Site Activities

0715 arrive @ yard
- load needed equipment & depart for P&WEH
0815 - onsite @ Pratt EH
- contact security to unlock Willow Pond gates
- begin equipment setup & calibrations
* took time to find WT-MW-42 due to abundant Japanese knot weed & remote location
* WT-MW-40 needs 4" roadbox installation before winter.
1415. A. Clarke finishes sampling last well
- have conversations with S. Trzaski performing to PE Samples
- unable to setup on 4th well due to locked gate & scheduled Accutest pickup for 1530
1550. relinquish samples to Beaumont
- waste management
1645. offsite to yard (A. Clarke)
1720. leave yard for day

Field Personnel Alex Clarke
Jeremy Corcoran

Nate Emmons

Signature

Loureiro Engineering Associates, Inc.

DAILY FIELD REPORT
CALIBRATION RECORD

LEA Comm. No.	**88UT059.001**
Project	UTC P&W Willow Brook 2011 Monitoring
Location	P&W East Hartford, East Hartford, CT
Client	Pratt & Whitney East Hartford-LL

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Date 9/28/11

pH Meter/Serial #

		Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	10D101383	0830	4.00	7.00	10.00	1000	100	99.8%
Calibration Check	10D101438	0830	4.00	7.00	10.00	1000	100	99.7%
Calibration Check								

Turbidity Meter/Serial #

		Time	0 NTU	~~20~~ 10 NTU	100 NTU	800 NTU
Initial Calibration	14476	0830	0.02	9.97		
Calibration Check	0643	0830	0.04	10.01		
Calibration Check						

PID Meter/Serial #

	Time	Standard	Meter Reading	Zero with
Initial Calibration				
Calibration Check				
Calibration Check				

Balance/Serial #

	Time	Standard	Balance
Initial Calibration			
Calibration Check			
Calibration Check			

Comments

Field Personnel: Alex Clarke, ~~Jeremy Corcoran~~, Nate Emmons

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
MISCELLANEOUS SAMPLES

LEA Comm. No.	**88UT059.001**	Page 4 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1241030	WT-MW-50	1245	DUP		NM	Duplicate Sample	795372
1241029		1440	BKE			Equipment Blank	
1241028		0930	BKT			Trip Blank	

Field Personnel: Alex Clarke, ~~Jeremy Corcoran~~ Nate Emmons

Signature

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 5 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 10:15
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-44 Sample Number(s) 1241015 1241015 uf

Initial Field Data and Measurements

Depth of Well 13.65 Reference Used T of R
Depth to Water 10.35 PID/FID Reading
Height of Column 3.30 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter .5" Material PVC
Protector Road Box / Stickup
Ground to Reference 3"
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
9:25	10.35	300	150	0							Purging
9:35					16.1	403.5	6.54	143.6	1.49	6.19	
9:45					16.0	401.4	6.37	148.3	1.49	4.65	
9:55					16.1	397.7	6.32	150.9	1.41	4.84	
10:00	NC				16.2	397.4	6.30	152.7	1.38	4.26	
10:05					16.0	410.0	6.29	153.2	1.43	3.98	
10:10					16.0	436.4	6.27	150.9	1.49	3.95	
10:15		300	150	7.5 L	16.1	431.2	6.27	151.8	1.42	3.87	
Sample											

NC

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI + Meth on WLI
Waste Container ID 795372

Additional Comments Unable to monitor DTW due to small well diameter.

Field Personnel Alex Clarke
Jeremy Corcoran

Signature Nathan Emmons

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 6 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/27/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 12:45
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-50 Sample Number(s) 1241016, 1241016 UP / 1241030, 1241030 UP

Initial Field Data and Measurements

Depth of Well 5.25 Reference Used Taf R
Depth to Water 3.37 PID/FID Reading
Height of Column 1.48 Interface Yes / (No) If yes, Depth Lighter / Heavier

Well Casing Diameter 2" Material PVC
Protector Road Box / (Stickup)
Ground to Reference 24"
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:25	3.37	300	150	0							Purging
11:35					22.2	3948	6.82	-150.0	1.92	46.5	
12:05					23.1	4783	6.82	-164.8	0.09	9.98	
12:15					23.1	5080	6.81	-155.5	0.08	8.85	
12:25					23.3	5099	6.81	-152.3	0.06	7.06	
12:30					23.2	5108	6.81	-152.1	0.06	6.44	
12:35					23.1	5110	6.81	-153.2	0.06	5.89	
12:40					23.2	5111	6.81	-154.7	0.04	5.73	
12:45		300	150	12.0	23.2	5110	6.80	-153.6	0.05	5.84	
Sample											

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI + Meth on WLI
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke
Jeremy Corcoran

Signature Nathan Emmons

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 7 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 15:20
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-58 Sample Number(s) 1241017 1241017 uf

Initial Field Data and Measurements

Depth of Well ____ Reference Used Top
Depth to Water 12.15 PID/FID Reading ____
Height of Column ____ Interface Yes (No) If yes, Depth ____ Lighter / Heavier

Well Casing Diameter 1.5" Material PVC
Protector (Road Box) / Stickup
Ground to Reference 4"
Comments

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
14:05	12.15	300	150	0							Purging
14:15	12.19				21.0	4039	6.47	97.8	2.04	39.4	
14:35	12.19				21.2	3917	6.37	80.8	1.51	22.3	
14:55	12.19				20.8	3822	6.37	68.1	1.40	9.94	
15:05	12.19				20.9	3827	6.36	67.2	1.43	7.65	
15:15	12.19				20.9	3829	6.36	69.4	1.41	5.89	
15:20	12.19	300	150	11.25	20.8	3823	6.36	68.3	1.41	5.57	
Sample											

Developement Method (Peristaltic Pump) / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? (Yes) / No If Yes, with what? DI + Meth wipe on WLI
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke
Jeremy Corcoran

Signature [signature]

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 8 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 10:36
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-42 Sample Number(s) 1241019 1241019uf

Initial Field Data and Measurements

Depth of Well 6.74 Reference Used top of pvc riser
Depth to Water 3.12 PID/FID Reading NM
Height of Column 3.62 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1/2" Material pvc
Protector Road Box / Stickup
Ground to Reference
Comments Tubing intake set @ 5'

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	no lock	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0945	3.12	300	140	0	—	—	Start	purging			→
0955	NA	300	140	1.4	19.8	251.3	6.34	153.9	2.25	1.36	
1005	NA	300	140	2.8	19.3	255.2	5.93	158.4	1.31	1.27	
1015	NA	300	140	4.2	19.3	256.7	5.90	159.3	1.23	1.18	
1020	NA	300	140	4.9	19.4	257.2	5.88	159.5	1.16	1.22	
1025	NA	300	140	5.6	19.3	265.3	5.85	161.4	1.06	1.15	
1030	NA	300	140	6.3	19.4	266.1	5.85	161.7	1.04	1.31	
1033	NA	300	140	6.7	19.5	267.7	5.85	161.8	1.04	1.28	
1036	NA	300	140	7.1	19.4	265.4	5.85	161.8	1.03	1.35	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI Methanol wipe for will
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke Nate Emmons *Signature*
~~Jeremy Corcoran~~

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 9 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 12:20
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-40 Sample Number(s) 1241020 1241020vf

Initial Field Data and Measurements

Depth of Well 17.75 Reference Used top of pvc riser
Depth to Water 12.05 PID/FID Reading NM
Height of Column 5.70 Interface Yes / No If yes, Depth Lighter / Heavier

Well Casing Diameter 1/2" Material pvc
Protector Road Box / Stickup
Ground to Reference
Comments tubing intake set @ 15'
* Well need 4" roadbox installation

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked		✓
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1135	12.05	300	150	0	←		Start purging				→
1140	NA	300	150	.75	22.3	7752	6.84	-85.1	1.64	24.6	
1145	NA	300	150	1.5	21.4	8090	6.93	-84.4	.89	4.23	
1200	NA	300	150	3.8	21.7	8100	7.00	-85.5	.77	1.12	
1205	NA	300	150	4.5	21.7	8110	7.00	-85.9	.78	.98	
1210	NA	300	150	5.3	21.6	8116	7.01	-85.8	.80	.76	
1215	NA	300	150	6	21.7	8116	7.01	-86.0	.79	.81	
1220	NA	300	150	6.8	21.6	8118	7.01	-85.9	.79	.75	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI; Methanol wipe for will.
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke Kate Emmons *Signature*
~~Jeremy Corcoran~~

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
LOW FLOW WELL SAMPLE

LEA Comm. No.	**88UT059.001**	Page 10 of 11
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	Sample Time 13:46
Client	Pratt & Whitney East Hartford-LL	

Monitoring Well Number WT-MW-19JR (RM) Sample Number(s) 1241021 1241021 uf

Initial Field Data and Measurements

Depth of Well 25.23 Reference Used top of pvc riser
Depth to Water 10.85 PID/FID Reading NM
Height of Column 14.38 Interface Yes / No If yes, Depth _____ Lighter / Heavier

Well Casing Diameter 1/2" Material pvc
Protector Road Box / Stickup
Ground to Reference _____
Comments tubing intake set @ 18'

General Condition	OK	Bad
Casing Secure	✓	
Collar Intact	✓	
Cover Locked	✓	
Other (describe)		

Development Information

Parameter / Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1300	10.85	300	150	0	←		start purging				→
1315	NA	300	150	2.3	20.5	4627	7.10	126.7	1.34	6.77	
1325	NA	300	150	3.8	19.5	4652	7.10	126.0	1.35	6.51	
1330	NA	300	150	4.5	18.4	4598	7.11	117.3	1.26	6.36	
1335	NA	300	150	5.3	18.1	4586	7.03	113.0	1.28	6.12	
1340	NA	300	150	6	17.7	4588	7.04	112.6	1.43	4.47	
1343	NA	300	150	6.5	17.8	4574	7.04	112.1	1.42	4.65	
1346	NA	300	150	6.9	17.7	4578	7.04	112.2	1.43	4.50	

Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other

Sample Field Treatment *If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on the Chain of Custody!*

Field Decontamination? Yes / No If Yes, with what? DI Methanol wipe for wells
Waste Container ID 795372

Additional Comments

Field Personnel Alex Clarke Nate Emmons ***Signature***
~~Jeremy Corcoran~~

Loureiro Engineering Associates, Inc.

FIELD SAMPLING RECORD
PERFORMANCE SAMPLE

LEA Comm. No.	**88UT059.001**	Page ____ of ____
Project	UTC P&W Willow Brook 2011 Monitoring	Date 9/28/11
Location	P&W East Hartford, East Hartford, CT	
Client	Pratt & Whitney East Hartford-LL	

LEA Sample ID	1241367 VOCs, PCBs	Loureiro Engineering PCBs Preservative: None Sample ID # 0926-11-02.2
LEA Sample ID	1241367uf metals	Loureiro Engineering Metals Preservative: HNO3 Sample ID # 0926-11-02.3
LEA Sample ID	1241368 ETPH	Loureiro Engineering TPH Preservative: None Sample ID # 0926-11-02.4
LEA Sample ID		
LEA Sample ID		
LEA Sample ID		

Field Personnel	Joe Trzaski A Clarke	***Signature***

11 of 11

United Technologies/Pratt & Whitney
Post Remediation Maintenance and Monitoring Program
Willow Brook and Willow Brook Pond

Weather Conditions: 70°
Inspection Date: 9/28/11
Inspection Time: 8:00

Inspector: Nate Emmons
Reviewed By:

INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR
1) Signs of erosion	Check for gullies of more than 2 inches in depth.	✓		
2) Signs of settling	Look for ponding and for settling of soil of more than 3 inches over a 5 sq. foot area.	✓		
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	✓		
4) Undesirable growth	Check for growth that is in excess of ½ inch in diameter (woody vegetation) and taller than 2 feet.	✓		
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing water or areas where surface water is running onto cap.	✓		
6) Condition of fencing and gates	Check perimeter fence to make sure it is not damaged (no holes greater than 4-inches in diameter), gates are operable, and locks are in place.	✓		
7) Condition of rip-rap in Willow Brook stream channel	Observe entire length of stream channel. Verify that rip-rap has not been displaced.	✓		
8) Condition of stone layer in Willow Brook	Perform probing of bottom of Willow Brook Ponds at 5 locations in upper pond and 15 locations within lower pond. Verify refusal on stone layer at all locations.	✓		
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in cap.	✓		
10) Monitoring well network	Check concrete collar protective casing, locks, legible well identification.	✓		
	1.Condition of lock	✓		
	2.Visible ID of wells			✓
	3.Ponding or infiltration of surface water		✓	
	4.Condition of concrete collar	✓		
	5.Condition of steel casing	✓		

Report all deficiencies to the designated representative of Pratt & Whitney
List all deficiencies, the corrective measures taken, and the date corrective measures were completed:

1) Wells Dont have visible ID, However they are easily Identified with map

Corrective Action:

2) few wells have standing water inside Road Box

Corrective Action:

3)

Corrective Action:

4)

Corrective Action:

ACCUTEST Laboratories

2 of 2

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: LEA
ADDRESS: 100 Northwest Dr.
CITY: Plainville STATE: CT ZIP: 06062
SEND REPORT TO: J TRZASKI@LOUREIRO.COM
PHONE #: 860-747-6181

FACILITY INFORMATION

PROJECT NAME: P+W EH Willow Pond GW
LOCATION: P+W EH
PROJECT NO.: 88UT059
FAX #: 860-747-8822

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	PCBs 8082	RCRA8 metals, +Cu, Ni, Zn	ETPH	LAB USE ONLY
	1241367	9/28/11	1120	AC	GW	2	2					✓				
	↓ ↓	↓	↓	↓	↓	2					2		✓			
	1241367uf	↓	1120	↓	↓	1			1					✓		
	1241368	↓	1150	↓	↓	2					2				✓	

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [x] OTHER (SPECIFY) LEA EDD

COMMENTS/REMARKS

CT RCP Deliverable

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	9-29-11 1600	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE ____ C

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 3

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #:

Client / Reporting Information

Company Name: LEA
Street Address: 100 Northwest Drive
City State Zip: Plainville CT 06062
Project Contact: Joe Trasko jtrasko@lanvero.com
E-mail:
Phone #: 860-747-0441
Fax #:
Sampler(s) Name(s): [illegible]
Phone #:

Project Information

Project Name: UTC PRW Willow Brook 2011 GW
Street:
City: East Hartford, CT
Project#: 88UT059.001
Client PO#:
Project Manager: Adam Dubrey

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfite	VOCs by 8260B	CT ETPH	PCBs by 8082	Total PCBs (Aroclor)	CT							LAB USE ONLY
	1241019		9-28-11	1036		GW	6	2				4					X	X	X									
	1241019uf			1036		GW	1			1										X								
	1241020			1220		GW	6	2				4					X	X	X									
	1241020uf			1220		GW	1			1										X								
	1241021			1346		GW	7	2				5					X	X	X		M							
	1241021uf			1346		GW	1			1										X	X	EM						
	1241029			1440		GW	7	2				5					X	X	X		X							
	1241029uf			1440		GW	1			1										X								
	1241028		9-28-11	0930		GW	1	1									X											

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format LEA
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Please provide CT RCP Analytical list for VOCs & PCBs

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	9-28-11 1555	1 [illegible]	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [ ] Cooler Temp.

ACCUTEST Laboratories

3/3

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: LEA
ADDRESS: 100 Northwest Dr
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO: Joe Trzaski
PHONE #: (860) 747-6181

FACILITY INFORMATION

PROJECT NAME: Willow Pond GW Monitoring
LOCATION: East Hartford CT
PROJECT NO.: 88UT059
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs	PCBs	CT-ETPH	RCRA 8 Metals + Cu Zn Ni	Total Cr6	LAB USE ONLY
	1241015	9/28/11	10:15	NE	GW	6	2				4	X	X	X			
	1241015 uf	↓	10:15	↓	↓	1			1						X		
	1241016	↓	12:45	↓	↓	7	2				5	X	X	X		M (RM)	
	1241016 uf	↓	12:45	↓	↓	1			1						X	X	
	1241017	↓	15:	↓	↓	6	2				4	X	X	X			
	1241017 uf	↓		↓	↓	1			1						X		
	1241030	↓	12:45	↓	↓	7	2				5	X	X	X		M (RM)	
	1241030 uf	9/28/11	12:45	NE	GW	1			1						X	X	

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER _____

APPROVED BY: _____

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY) _____

COMMENTS/REMARKS

PROVIDE CT RCP Report + RCP List for VOCs + PCBs

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Nathan Gunnard	9/28/11 1600	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE _____ C

Appendix B

Copies of Laboratory Reports (provided on CD-ROM)

New England ACCUTEST LABORATORIES

04/04/11

Technical Report for

Loureiro Eng. Associates

PWCTEH:Willow Brook - Pond W. East Hartford

88UT059.0001

Accutest Job Number: M98644

Sampling Date: 03/21/11

Report to:

Loureiro Eng.
100 Northwest Drive
Plainville, CT 06062
rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: **58**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Accutest Laboratories

Sample Summary

Loureiro Eng. Associates

Job No: M98644

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
M98644-1	03/21/11	11:31 JTC	03/21/11	AQ	Ground Water	1167437
M98644-2	03/21/11	11:31 JTC	03/21/11	AQ	Ground Water	1167437UF
M98644-3	03/21/11	13:41 JTC	03/21/11	AQ	Ground Water	1167438
M98644-4	03/21/11	13:41 JTC	03/21/11	AQ	Ground Water	1167438UF
M98644-5	03/21/11	15:41 JTC	03/21/11	AQ	Ground Water	1167439
M98644-7	03/21/11	10:34 JTC	03/21/11	AQ	Ground Water	1167452

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Loureiro Eng. Associates	**Job No**	M98644
Site:	PWCTEH:Willow Brook - Pond W. East Hartford	**Report Date**	4/4/2011 9:25:22 AM

6 Sample(s) were collected on 03/21/2011 and were received at Accutest on 03/21/2011 properly preserved, at 1.1 Deg. C and intact. These Samples received an Accutest job number of M98644. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSL1694

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 1,2-Dichloroethane, Dichlorodifluoromethane, Methylene bromide are outside control limits. Blank Spike meets program technical requirements.
- Quadratic regression is employed for Initial calibration standard MSL1677-ICC1677 for 2,2-dichloropropane. Initial calibration verification standard MSL1677-ICV1677 for methyl tert butyl ether, 2,2-dichloropropane, 1,1,1-trichloroethane, cis-1,3-dichloropropene, trans-1,3-dichloropropene exceed 35% Difference.
- MSL1694-BS for Trichlorofluoromethane, Carbon tetrachloride: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSL1694-CC1677 for dichlorodifluoromethane, trichlorofluoromethane, carbon tetrachloride, 1,2-dichloroethane exceed 30% Difference. This check standard met RCP criteria.

Extractables by GC By Method CT-ETPH 7/06

Matrix AQ **Batch ID:** OP24426

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082

Matrix AQ **Batch ID:** OP24421

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP16764

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98605-14FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Copper, Nickel are outside control limits for sample MP16764-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP16764-SD1 for Barium: Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- Only selected metals requested.

Metals By Method SW846 7470A

Matrix	AQ	Batch ID:	MP16760

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SW846 7196A

Matrix	AQ	Batch ID:	GN34394

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98644-3DUP, M98644-3MS were used as the QC samples for Chromium, Hexavalent.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M98644).

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1167437		
Lab Sample ID:	M98644-1	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L51004.D	1	04/01/11	AMY	n/a	n/a	MSL1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	12.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	2.1	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	8.9	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	3.1	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167437		
Lab Sample ID:	M98644-1	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	4.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	6.2	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167437		
Lab Sample ID:	M98644-1	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167437		
Lab Sample ID:	M98644-1	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49791.D	1	03/25/11	SS	03/24/11	OP24426	GBC2399
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.521	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	87%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167437		
Lab Sample ID:	M98644-1	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK1885.D	1	03/24/11	AP	03/23/11	OP24421	GBK75
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	65%		30-150%
877-09-8	Tetrachloro-m-xylene	63%		30-150%
2051-24-3	Decachlorobiphenyl	57%		30-150%
2051-24-3	Decachlorobiphenyl	58%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167437UF		
Lab Sample ID:	M98644-2	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	397	50	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	61.0	20	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12784
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16764

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L51005.D	1	04/01/11	AMY	n/a	n/a	MSL1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	4.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	1.4	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	104	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	132	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	37.1	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	8.7	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49792.D	1	03/25/11	SS	03/24/11	OP24426	GBC2399
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.509	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	120%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK1886.D	1	03/24/11	AP	03/23/11	OP24421	GBK75
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	66%		30-150%
877-09-8	Tetrachloro-m-xylene	73%		30-150%
2051-24-3	Decachlorobiphenyl	63%		30-150%
2051-24-3	Decachlorobiphenyl	65%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167438		
Lab Sample ID:	M98644-3	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 09:30	MC	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167438UF		
Lab Sample ID:	M98644-4	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	228	50	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/24/11	03/24/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12784
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16764

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167439		
Lab Sample ID:	M98644-5	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 09:30	MC	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167452		
Lab Sample ID:	M98644-7	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L50992.D	1	03/31/11	AMY	n/a	n/a	MSL1694
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167452		
Lab Sample ID:	M98644-7	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	80%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167452		
Lab Sample ID:	M98644-7	**Date Sampled:**	03/21/11
Matrix:	AQ - Ground Water	**Date Received:**	03/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle

Parameter Certification Exceptions

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD

ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M98644
ACCUTEST QUOTE #: BR1/2011-8

CLIENT INFORMATION
NAME: Robin McKinney
ADDRESS: 100 Northwest Drive
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO:
PHONE #: 860-747-6181

FACILITY INFORMATION
PROJECT NAME: Willow Brook
LOCATION: Pand W East Hartford
PROJECT NO.: 88 UTOS9.001
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE # M98644	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	CT ETPH	PCBs 8082	RCRA 8 metals, copper, nickel, zinc	Hexavalent Chromium	LAB USE ONLY
-1	1167437	3/21/11	11:31	JTC	GW	6	2				4	X	X	X			
-2	1167437UF	3/21/11	11:31	JTC	GW	1			1						X		
-3	1167438	3/21/11	13:41	JTC	GW	7	2				5	X	X	X		X	
-4	1167438 UF	3/21/11	13:41	JTC	GW	1			1						X		
-5	1167439	3/21/11	15:41	JTC	GW	7	2				5	X	X	X		X	
-6	1167439 UF	3/21/11	15:41	JTC	GW	1			1						X		
-7	1167452	3/21/11	10:34	JTC	GW	1	1					X					

Loc
16C, 5E
11F, 1B5

MATRIX CODES
DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION
- [x] 14 DAYS STANDARD
- [ ] 7 DAYS RUSH
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION
- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

FZN. 3/21/11

COMMENTS/REMARKS
Provide CT RCP Analytical lists for VOCs and PCBs and Provide CT RCP report. Hex 24 hour TAT

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	3/21/11 16:35	1. [signature]	2. B.C	3-21-11 18:15	2. B.C
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 1.1 C

M98644: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: M98644 **Client:** LEA **Immediate Client Services Action Required:** No

Date / Time Received: 3/21/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: WILLOW **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservatio	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

M98644: Chain of Custody
Page 2 of 2

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Accutest New England **Client:** Loureiro Eng. Associates

Project Location: PWCTEH:Willow Brook - Pond W. East Hartford **Project Number:** 88UT059.0001

Sampling Date(s): 3/21/2011

Laboratory Sample ID(s): M98644-1, M98644-2, M98644-3, M98644-4, M98644-5, M98644-6, M98644-7

Methods: CT-ETPH 7/06, SW846 6010C, SW846 7196A, 7470A, 8082, 8260B

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☑ No ☐
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☑ No ☐

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: Lab Director

Printed Name: Reza Tand Date: 4/4/2011
Accutest New England

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98644

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98644-1 1167437	Collected: 21-MAR-11 11:31 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-1	SW846 8082	24-MAR-11 19:45	AP	23-MAR-11	MEW	P8082RCP
M98644-1	CT-ETPH 7/06	25-MAR-11 19:38	SS	24-MAR-11	FC	BCTTPH
M98644-1	SW846 8260B	01-APR-11 00:02	AMY			V8260RCP
M98644-2 1167437UF	Collected: 21-MAR-11 11:31 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-2	SW846 7470A	24-MAR-11 13:25	MA	24-MAR-11	MA	HG
M98644-2	SW846 6010C	24-MAR-11 20:27	DA	24-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98644-3 1167438	Collected: 21-MAR-11 13:41 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-3	SW846 7196A	22-MAR-11 09:30	MC			XCR
M98644-3	SW846 8082	24-MAR-11 20:06	AP	23-MAR-11	MEW	P8082RCP
M98644-3	CT-ETPH 7/06	25-MAR-11 20:17	SS	24-MAR-11	FC	BCTTPH
M98644-3	SW846 8260B	01-APR-11 00:31	AMY			V8260RCP
M98644-4 1167438UF	Collected: 21-MAR-11 13:41 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-4	SW846 7470A	24-MAR-11 13:27	MA	24-MAR-11	MA	HG
M98644-4	SW846 6010C	24-MAR-11 20:31	DA	24-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98644-5 1167439	Collected: 21-MAR-11 15:41 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-5	SW846 7196A	22-MAR-11 09:30	MC			XCR
M98644-7 1167452	Collected: 21-MAR-11 10:34 By: JTC		Received: 21-MAR-11 By: SAP			
M98644-7	SW846 8260B	31-MAR-11 18:14	AMY			V8260RCP

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-MB	L50989.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-MB	L50989.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-MB	L50989.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%

Blank Spike Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-BS	L50987.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	39.7	79	70-130
107-13-1	Acrylonitrile	50	44.1	88	70-130
71-43-2	Benzene	50	46.0	92	70-130
108-86-1	Bromobenzene	50	50.2	100	70-130
75-27-4	Bromodichloromethane	50	62.0	124	70-130
75-25-2	Bromoform	50	55.4	111	70-130
74-83-9	Bromomethane	50	47.2	94	70-130
78-93-3	2-Butanone (MEK)	50	43.3	87	70-130
104-51-8	n-Butylbenzene	50	56.0	112	70-130
135-98-8	sec-Butylbenzene	50	54.3	109	70-130
98-06-6	tert-Butylbenzene	50	63.5	127	70-130
75-15-0	Carbon disulfide	50	49.6	99	70-130
56-23-5	Carbon tetrachloride	50	84.0	168* [a]	70-130
108-90-7	Chlorobenzene	50	43.6	87	70-130
75-00-3	Chloroethane	50	54.6	109	70-130
67-66-3	Chloroform	50	54.2	108	70-130
74-87-3	Chloromethane	50	41.7	83	70-130
95-49-8	o-Chlorotoluene	50	53.4	107	70-130
106-43-4	p-Chlorotoluene	50	55.2	110	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	59.8	120	70-130
124-48-1	Dibromochloromethane	50	57.5	115	70-130
106-93-4	1,2-Dibromoethane	50	46.7	93	70-130
95-50-1	1,2-Dichlorobenzene	50	49.6	99	70-130
541-73-1	1,3-Dichlorobenzene	50	50.7	101	70-130
106-46-7	1,4-Dichlorobenzene	50	47.8	96	70-130
75-71-8	Dichlorodifluoromethane	50	66.3	133* [b]	70-130
75-34-3	1,1-Dichloroethane	50	51.9	104	70-130
107-06-2	1,2-Dichloroethane	50	74.6	149* [b]	70-130
75-35-4	1,1-Dichloroethene	50	42.5	85	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.4	95	70-130
156-60-5	trans-1,2-Dichloroethene	50	47.9	96	70-130
78-87-5	1,2-Dichloropropane	50	46.1	92	70-130
142-28-9	1,3-Dichloropropane	50	46.1	92	70-130
594-20-7	2,2-Dichloropropane	50	56.4	113	70-130
563-58-6	1,1-Dichloropropene	50	59.5	119	70-130
10061-01-5	cis-1,3-Dichloropropene	50	48.3	97	70-130

Blank Spike Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-BS	L50987.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	49.2	98	70-130
100-41-4	Ethylbenzene	50	47.8	96	70-130
76-13-1	Freon 113	50	64.6	129	70-130
87-68-3	Hexachlorobutadiene	50	62.7	125	70-130
591-78-6	2-Hexanone	50	41.5	83	70-130
98-82-8	Isopropylbenzene	50	48.1	96	70-130
99-87-6	p-Isopropyltoluene	50	53.0	106	70-130
1634-04-4	Methyl Tert Butyl Ether	50	57.0	114	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.3	95	70-130
74-95-3	Methylene bromide	50	65.4	131* [b]	70-130
75-09-2	Methylene chloride	50	50.3	101	70-130
91-20-3	Naphthalene	50	44.3	89	70-130
103-65-1	n-Propylbenzene	50	53.3	107	70-130
100-42-5	Styrene	50	48.8	98	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.8	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	37.1	74	70-130
127-18-4	Tetrachloroethene	50	49.0	98	70-130
109-99-9	Tetrahydrofuran	50	41.6	83	70-130
108-88-3	Toluene	50	47.7	95	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	53.1	106	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.2	104	70-130
120-82-1	1,2,4-Trichlorobenzene	50	53.5	107	70-130
71-55-6	1,1,1-Trichloroethane	50	62.9	126	70-130
79-00-5	1,1,2-Trichloroethane	50	46.8	94	70-130
79-01-6	Trichloroethene	50	55.1	110	70-130
75-69-4	Trichlorofluoromethane	50	91.1	182* [a]	70-130
96-18-4	1,2,3-Trichloropropane	50	46.1	92	70-130
95-63-6	1,2,4-Trimethylbenzene	50	56.8	114	70-130
108-67-8	1,3,5-Trimethylbenzene	50	57.9	116	70-130
75-01-4	Vinyl chloride	50	51.3	103	70-130
	m,p-Xylene	100	91.7	92	70-130
95-47-6	o-Xylene	50	46.9	94	70-130

Blank Spike Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1694-BS	L50987.D	1	03/31/11	AMY	n/a	n/a	MSL1694

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98644-1, M98644-3, M98644-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	96%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Blank Spike meets program technical requirements.

Volatile Internal Standard Area Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSL1694-CC1677	**Injection Date:**	03/31/11
Lab File ID:	L50987.D	**Injection Time:**	15:49
Instrument ID:	GCMSL	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	83304	8.19	121793	9.03	72673	12.26	69219	14.82	44420	5.84
Upper Limit [a]	166608	8.69	243586	9.53	145346	12.76	138438	15.32	88840	6.34
Lower Limit [b]	41652	7.69	60897	8.53	36337	11.76	34610	14.32	22210	5.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1694-BS	83304	8.19	121793	9.03	72673	12.26	69219	14.82	44420	5.84
MSL1694-MB	83178	8.19	124071	9.03	65955	12.27	63380	14.83	39477	5.83
ZZZZZZ	83295	8.20	123024	9.03	67202	12.27	64378	14.83	37766	5.83
ZZZZZZ	84931	8.20	122183	9.03	66734	12.27	64401	14.83	40892	5.83
M98644-7	87168	8.20	129449	9.03	70318	12.27	66574	14.83	38998	5.83
M98647-1	81601	8.19	123754	9.03	66265	12.27	64548	14.83	41210	5.85
ZZZZZZ	82211	8.19	124605	9.03	68900	12.27	64165	14.83	40522	5.90
ZZZZZZ	84353	8.19	126299	9.03	70832	12.27	61725	14.83	39838	5.90
ZZZZZZ	83092	8.20	126739	9.03	66341	12.27	64755	14.83	37703	5.86
ZZZZZZ	83674	8.19	125931	9.03	67739	12.27	61490	14.83	38618	5.90
ZZZZZZ	84034	8.19	124445	9.03	65262	12.27	62451	14.83	40808	5.84
ZZZZZZ	81505	8.20	121594	9.03	65931	12.27	64024	14.83	41312	5.84
ZZZZZZ	80686	8.19	124424	9.03	64295	12.27	62581	14.83	45661	5.88
ZZZZZZ	81709	8.19	124325	9.03	67713	12.27	62419	14.83	44414	5.86
ZZZZZZ	80993	8.19	125892	9.03	66475	12.27	61025	14.83	38414	5.89
ZZZZZZ	83225	8.20	124354	9.03	67671	12.27	64250	14.83	39368	5.85
M98644-1	82263	8.19	123086	9.03	66713	12.27	63751	14.83	43381	5.87
M98644-3	79683	8.20	121448	9.03	64919	12.27	60087	14.83	42541	5.89
ZZZZZZ	83740	8.19	127018	9.03	68572	12.27	66152	14.83	39600	5.83
ZZZZZZ	84196	8.19	129839	9.03	67957	12.27	64632	14.83	42387	5.90
ZZZZZZ	83563	8.20	124328	9.03	65148	12.27	64586	14.83	43538	5.84
M98647-1MS	86993	8.19	130337	9.03	76247	12.26	70544	14.82	46603	5.84
M98647-1MSD	85810	8.19	127680	9.03	74340	12.26	69209	14.82	44569	5.84

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M98644-1	L51004.D	93.0	93.0	82.0
M98644-3	L51005.D	92.0	92.0	86.0
M98644-7	L50992.D	80.0	92.0	93.0
MSL1694-BS	L50987.D	93.0	96.0	95.0
MSL1694-MB	L50989.D	81.0	91.0	98.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24426-MB	BJ1864.D	1	03/24/11	AL	03/24/11	OP24426	GBJ87

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98644-1, M98644-3

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	82%	50-149%

Method Blank Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24421-MB	BK1869.D	1	03/24/11	AP	03/23/11	OP24421	GBK75

The QC reported here applies to the following samples: **Method:** SW846 8082

M98644-1, M98644-3

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	79%	30-150%
877-09-8	Tetrachloro-m-xylene	79%	30-150%
2051-24-3	Decachlorobiphenyl	67%	30-150%
2051-24-3	Decachlorobiphenyl	68%	30-150%

Blank Spike Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24426-BS	BJ1866.D	1	03/24/11	AL	03/24/11	OP24426	GBJ87

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98644-1, M98644-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.606	87	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
3386-33-2	1-Chlorooctadecane	95%	50-149%

Blank Spike Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24421-BS	BK1870.D	1	03/24/11	AP	03/23/11	OP24421	GBK75

The QC reported here applies to the following samples: **Method:** SW846 8082

M98644-1, M98644-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.8	90	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.7	85	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	79%	30-150%
877-09-8	Tetrachloro-m-xylene	81%	30-150%
2051-24-3	Decachlorobiphenyl	69%	30-150%
2051-24-3	Decachlorobiphenyl	70%	30-150%

Semivolatile Surrogate Recovery Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: CT-ETPH 7/06 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
M98644-1	BC49791.D	87.0
M98644-3	BC49792.D	120.0
OP24426-BS	BJ1866.D	95.0
OP24426-MB	BJ1864.D	82.0

Surrogate Compounds	Recovery Limits
S1 = 1-Chlorooctadecane	50-149%

(a) Recovery from GC signal #1

Semivolatile Surrogate Recovery Summary

Job Number: M98644
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8082 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
M98644-1	BK1885.D	65.0	63.0	57.0	58.0
M98644-3	BK1886.D	66.0	73.0	63.0	65.0
OP24421-BS	BK1870.D	79.0	81.0	69.0	70.0
OP24421-MB	BK1869.D	79.0	79.0	67.0	68.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16760
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/24/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	0.0060	<0.20

Associated samples MP16760: M98644-2, M98644-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.1

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16760
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/24/11 03/24/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.8	3	93.3	3.5	20

Associated samples MP16760: M98644-2, M98644-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.2

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BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/24/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	19	40		
Antimony	6.0	.97	2		
Arsenic	4.0	.96	1.1	0.10	<4.0
Barium	50	.37	.5	0.80	<50
Beryllium	4.0	.23	.24		
Boron	100	.45	1.8		
Cadmium	4.0	.14	.17	0.0	<4.0
Calcium	5000	11	22		
Chromium	10	.6	.6	-0.30	<10
Cobalt	50	.16	.22		
Copper	25	1.1	2.5	0.10	<25
Gold	50	1.6	2.9		
Iron	100	6.7	8.5		
Lead	5.0	.94	1.4	-0.30	<5.0
Magnesium	5000	55	110		
Manganese	15	.11	.43		
Molybdenum	100	.3	.36		
Nickel	40	.19	.35	-0.10	<40
Palladium	50	2.9	3.4		
Platinum	50	7.2	15		
Potassium	5000	46	52		
Selenium	10	1.5	1.6	-0.50	<10
Silicon	100	1.4	18		
Silver	5.0	.77	1	0.10	<5.0
Sodium	5000	19	41		
Strontium	10	.19	.38		
Thallium	5.0	.67	.88		
Tin	100	.39	.47		
Titanium	50	.59	1		
Tungsten	100	8.9	13		
Vanadium	10	.84	1.5		
Zinc	20	.3	.61	0.80	<20

Associated samples MP16764: M98644-2, M98644-4

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/24/11					03/24/11	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	506	500	101.2	80-120	505	500	101.0	0.2	20
Barium	2060	2000	103.0	80-120	2060	2000	103.0	0.0	20
Beryllium	anr								
Boron									
Cadmium	521	500	104.2	80-120	525	500	105.0	0.8	20
Calcium									
Chromium	498	500	99.6	80-120	495	500	99.0	0.6	20
Cobalt									
Copper	490	500	98.0	80-120	484	500	96.8	1.2	20
Gold									
Iron									
Lead	984	1000	98.4	80-120	985	1000	98.5	0.1	20
Magnesium									
Manganese									
Molybdenum									
Nickel	506	500	101.2	80-120	508	500	101.6	0.4	20
Palladium									
Platinum									
Potassium									
Selenium	511	500	102.2	80-120	512	500	102.4	0.2	20
Silicon									
Silver	203	200	101.5	80-120	199	200	99.5	2.0	20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	511	500	102.2	80-120	513	500	102.6	0.4	20

Associated samples MP16764: M98644-2, M98644-4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.2

7

SERIAL DILUTION RESULTS SUMMARY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/24/11

Metal	M98605-14F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	1.10	0.00	100.0(a)	0-10
Barium	22.9	39.3	71.6 (b)	0-10
Beryllium	anr			
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	4.50	0.00	100.0(a)	0-10
Gold				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	0.900	0.00	100.0(a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	19.9	20.9	5.0	0-10

Associated samples MP16764: M98644-2, M98644-4

SERIAL DILUTION RESULTS SUMMARY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16764 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial Dilution RPD acceptable due to low duplicate and sample concentrations.

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN34394	0.010	0.0	mg/l	0.1	0.10	100.0	85-115%
Chromium, Hexavalent	GN34394			mg/l	0.1	0.10	100.0	85-115%

Associated Samples:
Batch GN34394: M98644-3, M98644-5
(*) Outside of QC limits

8.1
8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN34394	M98644-3	mg/l	0.0035	0.0038	8.2	0-20%

Associated Samples:
Batch GN34394: M98644-3, M98644-5
(*) Outside of QC limits

8.2
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98644
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN34394	M98644-3	mg/l	0.0035	0.1	0.10	96.5	85-115%

Associated Samples:
Batch GN34394: M98644-3, M98644-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

8.3
8

New England ACCUTEST LABORATORIES

04/05/11

Technical Report for

Loureiro Eng. Associates

PWCTEH:Willow Brook - Pond W. East Hartford

88UT059.0001

Accutest Job Number: M98677

Sampling Date: 03/22/11

Report to:

Loureiro Eng.
100 Northwest Drive
Plainville, CT 06062
rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: **146**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

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Accutest Laboratories

Sample Summary

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
M98677-1	03/22/11	09:00	JCHG	03/22/11	AQ	Ground Water	1167450
M98677-2	03/22/11	15:30	JCHG	03/22/11	AQ	Ground Water	1167449
M98677-3	03/22/11	15:30	JCHG	03/22/11	AQ	Ground Water	1167449UF
M98677-4	03/22/11	10:31	JCHG	03/22/11	AQ	Ground Water	1167443
M98677-5	03/22/11	10:31	JCHG	03/22/11	AQ	Ground Water	1167443UF
M98677-6	03/22/11	12:31	JCHG	03/22/11	AQ	Ground Water	1167444
M98677-7	03/22/11	12:31	JCHG	03/22/11	AQ	Ground Water	1167444UF
M98677-8	03/22/11	14:51	JCHG	03/22/11	AQ	Ground Water	1167445
M98677-9	03/22/11	14:51	JCHG	03/22/11	AQ	Ground Water	1167445UF
M98677-10	03/22/11	11:50	JCHG	03/22/11	AQ	Ground Water	1167446
M98677-11	03/22/11	11:50	JCHG	03/22/11	AQ	Ground Water	1167446UF
M98677-12	03/22/11	14:30	JCHG	03/22/11	AQ	Ground Water	1167447
M98677-13	03/22/11	14:30	JCHG	03/22/11	AQ	Ground Water	1167447UF

Accutest Laboratories

Sample Summary
(continued)

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
M98677-14	03/22/11	15:15	JCHG	03/22/11	AQ	Ground Water	1167448
M98677-15	03/22/11	15:15	JCHG	03/22/11	AQ	Ground Water	1167448UF
M98677-16	03/22/11	11:50	JCHG	03/22/11	AQ	Ground Water	1167451
M98677-17	03/22/11	11:50	JCHG	03/22/11	AQ	Ground Water	1167451UF
M98677-18	03/22/11	14:26	JCHG	03/22/11	AQ	Ground Water	1167442
M98677-19	03/22/11	14:26	JCHG	03/22/11	AQ	Ground Water	1167442UF
M98677-20	03/22/11	12:21	JCHG	03/22/11	AQ	Ground Water	1167441
M98677-21	03/22/11	12:21	JCHG	03/22/11	AQ	Ground Water	1167441UF
M98677-22	03/22/11	10:16	JCHG	03/22/11	AQ	Ground Water	1167440
M98677-23	03/22/11	10:16	JCHG	03/22/11	AQ	Ground Water	1167440UF

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Loureiro Eng. Associates	**Job No**	M98677
Site:	PWCTEH:Willow Brook - Pond W. East Hartford	**Report Date**	4/5/2011 4:35:22 PM

23 Sample(s) were collected on 03/22/2011 and were received at Accutest on 03/22/2011 properly preserved, at 1.2 Deg. C and intact. These Samples received an Accutest job number of M98677. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSN1922

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MSN1922-BS/BSD for Acrylonitrile: Outside control limits. Associated samples are non-detect for this compound.
- Blank Spike Duplicate Recovery(s) for Chloromethane, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Initial calibration verification MSN1860-ICV1860 for acetone exceed 35% Difference.

Matrix AQ **Batch ID:** MSR742

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98677-4MS, M98677-4MSD were used as the QC samples indicated.
- MSR742-BS/MS/MSD for Acrylonitrile: Outside control limits. Associated samples are non-detect for this compound.

Matrix AQ **Batch ID:** MSR743

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method CT-ETPH 7/06

Matrix AQ **Batch ID:** OP24441

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ **Batch ID:** OP24453

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082

Matrix AQ	Batch ID: OP24454

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- M98677-8 for Tetrachloro-m-xylene: Outside control limits due to possible matrix interference.

Matrix AQ	Batch ID: OP24475

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix AQ	Batch ID: MP16782

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98677-15DUP, M98677-15MS, M98677-15SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Copper, Nickel, Zinc are outside control limits for sample MP16782-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only selected metals requested.

Metals By Method SW846 7470A

Matrix AQ	Batch ID: MP16760

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98677-3DUP, M98677-3MS were used as the QC samples for metals.

Wet Chemistry By Method SW846 7196A

Matrix AQ	Batch ID: GN34411

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M98677-2DUP, M98677-2MS were used as the QC samples for Chromium, Hexavalent.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M98677).

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1167450		
Lab Sample ID:	M98677-1	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N50959.D	1	04/01/11	JP	n/a	n/a	MSN1922
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167450		
Lab Sample ID:	M98677-1	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167450		
Lab Sample ID:	M98677-1	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	107%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N50960.D	1	04/01/11	JP	n/a	n/a	MSN1922
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49851.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	85%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25177.D	1	03/30/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-150%
877-09-8	Tetrachloro-m-xylene	71%		30-150%
2051-24-3	Decachlorobiphenyl	60%		30-150%
2051-24-3	Decachlorobiphenyl	62%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167449		
Lab Sample ID:	M98677-2	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 20:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167449UF		
Lab Sample ID:	M98677-3	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	< 50	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167443		
Lab Sample ID:	M98677-4	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20340.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167443		
Lab Sample ID:	M98677-4	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167443		
Lab Sample ID:	M98677-4	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167443		
Lab Sample ID:	M98677-4	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49852.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	81%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167443		
Lab Sample ID:	M98677-4	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25178.D	1	03/30/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		30-150%
877-09-8	Tetrachloro-m-xylene	64%		30-150%
2051-24-3	Decachlorobiphenyl	54%		30-150%
2051-24-3	Decachlorobiphenyl	56%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167443UF		
Lab Sample ID:	M98677-5	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	< 50	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167444		
Lab Sample ID:	M98677-6	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20343.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167444		
Lab Sample ID:	M98677-6	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167444		
Lab Sample ID:	M98677-6	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167444		
Lab Sample ID:	M98677-6	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49853.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	72%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167444		
Lab Sample ID:	M98677-6	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25179.D	1	03/30/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		30-150%
877-09-8	Tetrachloro-m-xylene	69%		30-150%
2051-24-3	Decachlorobiphenyl	57%		30-150%
2051-24-3	Decachlorobiphenyl	59%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167444UF		
Lab Sample ID:	M98677-7	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	< 50	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20344.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	8.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	9.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.7	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	7.1	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	8.9	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49854.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	1.06	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	76%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25180.D	1	03/31/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		30-150%
877-09-8	Tetrachloro-m-xylene	207% [a]		30-150%
2051-24-3	Decachlorobiphenyl	55%		30-150%
2051-24-3	Decachlorobiphenyl	57%		30-150%

(a) Outside control limits due to possible matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167445		
Lab Sample ID:	M98677-8	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 20:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167445UF		
Lab Sample ID:	M98677-9	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.3	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	151	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	291	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	392	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	4380	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	19.4	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	27.8	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20350.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2	R20367.D	5	04/04/11	TD	n/a	n/a	MSR743

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	12.0	2.0	ug/l	
67-66-3	Chloroform	5.9	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	24.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	3.5	1.0	ug/l	
75-35-4	1,1-Dichloroethene	349	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	134	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.4	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	130	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	124	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	1.5	1.0	ug/l	
79-01-6	Trichloroethene	665 [a]	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	32.8	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%	90%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%	82%	70-130%
460-00-4	4-Bromofluorobenzene	82%	85%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49856.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	700 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.445	0.11	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	74%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25181.D	1	03/31/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	600 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.42	ug/l	
11104-28-2	Aroclor 1221	ND	0.42	ug/l	
11141-16-5	Aroclor 1232	ND	0.42	ug/l	
53469-21-9	Aroclor 1242	ND	0.42	ug/l	
12672-29-6	Aroclor 1248	ND	0.42	ug/l	
11097-69-1	Aroclor 1254	ND	0.42	ug/l	
11096-82-5	Aroclor 1260	ND	0.42	ug/l	
37324-23-5	Aroclor 1262	ND	0.42	ug/l	
11100-14-4	Aroclor 1268	ND	0.42	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		30-150%
877-09-8	Tetrachloro-m-xylene	68%		30-150%
2051-24-3	Decachlorobiphenyl	61%		30-150%
2051-24-3	Decachlorobiphenyl	64%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167446		
Lab Sample ID:	M98677-10	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 20:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167446UF		
Lab Sample ID:	M98677-11	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	6.8	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	253	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	59.2	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	21.1	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20345.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	81%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49857.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.241	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	85%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25182.D	1	03/31/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		30-150%
877-09-8	Tetrachloro-m-xylene	81%		30-150%
2051-24-3	Decachlorobiphenyl	67%		30-150%
2051-24-3	Decachlorobiphenyl	71%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167447		
Lab Sample ID:	M98677-12	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 20:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167447UF		
Lab Sample ID:	M98677-13	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	392	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	45.4	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	33.2	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167448		
Lab Sample ID:	M98677-14	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20346.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167448		
Lab Sample ID:	M98677-14	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167448		
Lab Sample ID:	M98677-14	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	79%		70-130%
460-00-4	4-Bromofluorobenzene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167448		
Lab Sample ID:	M98677-14	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49858.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	790 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.103	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	77%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167448		
Lab Sample ID:	M98677-14	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25183.D	1	03/31/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	650 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.38	ug/l	
11104-28-2	Aroclor 1221	ND	0.38	ug/l	
11141-16-5	Aroclor 1232	ND	0.38	ug/l	
53469-21-9	Aroclor 1242	ND	0.38	ug/l	
12672-29-6	Aroclor 1248	ND	0.38	ug/l	
11097-69-1	Aroclor 1254	ND	0.38	ug/l	
11096-82-5	Aroclor 1260	ND	0.38	ug/l	
37324-23-5	Aroclor 1262	ND	0.38	ug/l	
11100-14-4	Aroclor 1268	ND	0.38	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	61%		30-150%
2051-24-3	Decachlorobiphenyl	63%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167448UF		
Lab Sample ID:	M98677-15	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	< 50	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20351.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2	R20368.D	5	04/04/11	TD	n/a	n/a	MSR743

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.52	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	11.3	2.0	ug/l	
67-66-3	Chloroform	6.4	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	25.7	1.0	ug/l	
107-06-2	1,2-Dichloroethane	3.7	1.0	ug/l	
75-35-4	1,1-Dichloroethene	354	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	145	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	2.3	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	140	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	130	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	1.9	1.0	ug/l	
79-01-6	Trichloroethene	658 [a]	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	32.2	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%	89%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	77%	81%	70-130%
460-00-4	4-Bromofluorobenzene	81%	85%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC49859.D	1	03/29/11	SS	03/25/11	OP24441	GBC2402
Run #2							

	Initial Volume	Final Volume
Run #1	780 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.475	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	74%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE25184.D	1	03/31/11	AP	03/26/11	OP24454	GBE1455
Run #2							

	Initial Volume	Final Volume
Run #1	750 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.33	ug/l	
11104-28-2	Aroclor 1221	ND	0.33	ug/l	
11141-16-5	Aroclor 1232	ND	0.33	ug/l	
53469-21-9	Aroclor 1242	ND	0.33	ug/l	
12672-29-6	Aroclor 1248	ND	0.33	ug/l	
11097-69-1	Aroclor 1254	ND	0.33	ug/l	
11096-82-5	Aroclor 1260	ND	0.33	ug/l	
37324-23-5	Aroclor 1262	ND	0.33	ug/l	
11100-14-4	Aroclor 1268	ND	0.33	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	62%		30-150%
2051-24-3	Decachlorobiphenyl	65%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167451		
Lab Sample ID:	M98677-16	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	03/22/11 20:40	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167451UF		
Lab Sample ID:	M98677-17	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.8	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	258	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	60.1	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	24.6	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167442		
Lab Sample ID:	M98677-18	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20347.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167442		
Lab Sample ID:	M98677-18	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167442		
Lab Sample ID:	M98677-18	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	80%		70-130%
460-00-4	4-Bromofluorobenzene	84%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167442		
Lab Sample ID:	M98677-18	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BG26331.D	1	04/01/11	KD	03/26/11	OP24453	GBG889
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	108%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167442		
Lab Sample ID:	M98677-18	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ65254.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	71%		30-150%
877-09-8	Tetrachloro-m-xylene	70%		30-150%
2051-24-3	Decachlorobiphenyl	68%		30-150%
2051-24-3	Decachlorobiphenyl	68%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167442UF		
Lab Sample ID:	M98677-19	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	96.8	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167441		
Lab Sample ID:	M98677-20	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20348.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167441		
Lab Sample ID:	M98677-20	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167441		
Lab Sample ID:	M98677-20	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	78%		70-130%
460-00-4	4-Bromofluorobenzene	82%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167441		
Lab Sample ID:	M98677-20	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BG26333.D	1	04/01/11	KD	03/26/11	OP24453	GBG889
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.188	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	78%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167441		
Lab Sample ID:	M98677-20	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ65255.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		30-150%
877-09-8	Tetrachloro-m-xylene	72%		30-150%
2051-24-3	Decachlorobiphenyl	68%		30-150%
2051-24-3	Decachlorobiphenyl	68%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167441UF		
Lab Sample ID:	M98677-21	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	8.1	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	54.8	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	< 25	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 40	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1167440		
Lab Sample ID:	M98677-22	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R20349.D	1	04/02/11	TD	n/a	n/a	MSR742
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167440		
Lab Sample ID:	M98677-22	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	3.1	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	25.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	1.4	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167440		
Lab Sample ID:	M98677-22	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	77%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167440		
Lab Sample ID:	M98677-22	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BG26335.D	1	04/01/11	KD	03/26/11	OP24453	GBG889
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.281	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane	102%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167440		
Lab Sample ID:	M98677-22	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ65256.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-150%
877-09-8	Tetrachloro-m-xylene	73%		30-150%
2051-24-3	Decachlorobiphenyl	59%		30-150%
2051-24-3	Decachlorobiphenyl	59%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1167440UF		
Lab Sample ID:	M98677-23	**Date Sampled:**	03/22/11
Matrix:	AQ - Ground Water	**Date Received:**	03/22/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Barium	615	50	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Cadmium	< 4.0	4.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Copper	45.0	25	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Lead	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	03/24/11	03/24/11	MA	SW846 7470A [1]	SW846 7470A [3]
Nickel	133	40	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Silver	< 5.0	5.0	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	03/28/11	03/29/11	DA	SW846 6010C [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA12780
(2) Instrument QC Batch: MA12801
(3) Prep QC Batch: MP16760
(4) Prep QC Batch: MP16782

RL = Reporting Limit

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle

Parameter Certification Exceptions

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD

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ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M98677
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY: Plainville STATE: CT ZIP: 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88UT059.001
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	RCRA 8 Metals+Cu, Ni, Zn	Hexavalent Chromium	LAB USE ONLY
-1	1167450	3/22/11	900	JC	GW	~~3~~ 2	X					X	X					
-2	1167449	3/22/11	1530	JC		3	X					X	X					
	1167449		1530	JC		5						X		X	X		X	
-3	1167449uf		1530	JC		1			X			X				X		
-4	1167443		1031	HG		3	X					X	X					
	1167443		1031	HG		4						X		X	X			
-5	1167443uf		1031	HG		1			X			X				X		
-6	1167444		1231	HG		3	X					X	X					
	1167444		1231	HG		4						X		X	X			
-7	1167444uf		1231	HG		1			X			X				X		16D, 5F, 1D5
-8	1167445	3/22/11	1451	HG	GW	3	X					X	X					12A

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	3/22/11 1700	1. [signature]	2. B.C	3-22-11 1715	2. B.C
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE 0.1°C, 1.2-1.1 C TEMPERATURE

M98677: Chain of Custody
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ACCUTEST Laboratories

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CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M98677
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY: Plainville STATE: CT ZIP: 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 880T059.001
FAX #:

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	RCRA 8 metals + Cu, Ni, Zn	Hexavalent Chromium	LAB USE ONLY
-8	1167445	3/22/11	1451	HG	GW	5						X		X	X		X	
-9	1167445uf		1451	HG		1			X			X				X		
-10	1167446		1150	JVE		3	X					X	X					
	1167446		1150	JVE		5						X		X	X		X	
-11	1167446uf		1150	JVE		1			X			X				X		
-12	1167447		1430	NE		3	X					X	X					
	1167447		1430	NE		2						X		X	X		X	
-13	1167447uf		1430	NE		1			X			X				X		
-14	1167448		1515	NE		3	X					X	X					
	1167448		1515	NE		4						X		X	X			
-15	1167448uf	3/22/11	1515	NE	GW	1			X			X				X		

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	3/22/11 1700	1. [signature]	2. [signature]	3-22-11	2. [signature]
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 1.2, 1.4 °C

M98677: Chain of Custody
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ACCUTEST Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M98677
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates, Inc.
ADDRESS: 100 Northwest Drive
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willowbrook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88UT059.001
FAX #:

ANALYTICAL INFORMATION

VOCs 8260 | PCBs 8082 | CT ETPH | RCRA 8 Metals + Cu, Ni, Zn | Hexavalent Cr

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	NaOSO4	NONE	ICE	VOCs 8260	PCBs 8082	CT ETPH	RCRA 8 Metals + Cu, Ni, Zn	Hexavalent Cr	LAB USE ONLY
-16	1167451	3/22/11	1150	NE	GW	3	X					X	X					
	1167451		1150	NE		5						X		X	X		X	
-17	1167451uf		1150	NE		1			X			X				X		
-18	1167442		1426	JC		3	X					X	X					
	1167442		1426	JC		5						X		X	X			
-19	1167442uf		1426	JC		1			X			X				X		
-20	1167441		1221	JC		3	X					X	X					
	1167441		1221	JC		4						X		X	X			
-21	1167441uf		1221	JC		1			X			X				X		
-22	1167440		1016	JC		3	X					X	X					
	1167440	3/22/11	1016	JC	GW	4						X		X	X			

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Heather Shu	3/22/11 1700	1. BC	2. BC	3-22-11	2. BC
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE °C 1.0 +/- 2 1.6

4.2 4

M98677: Chain of Custody
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CHAIN OF CUSTODY

ACCUTEST Laboratories

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: M98677
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates
ADDRESS: 100 Northwest Drive
CITY, STATE: Plainville, CT ZIP: 06062
SEND REPORT TO: Robin McKinney
PHONE #: 860-410-3000

FACILITY INFORMATION

PROJECT NAME: Willow Brook 2011 Monitoring
LOCATION: East Hartford, CT
PROJECT NO.: 88UT059.001
FAX #:

ANALYTICAL INFORMATION

RCRA 8 Metals Cy, N 3

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	ICE	RCRA 8 Metals Cy, N 3	LAB USE ONLY
-23	1167440uf	3/22/11	1016	JC	GW	1			X			X	X	

DATA TURNAROUND INFORMATION

- ☑ 14 DAYS STANDARD
- ☐ 7 DAYS *RUSH*
- ☐ 48 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☑ STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

Please provide CT RCP analytical lists for VOCs + PCBs + provide CT RCP report

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Heather [signature]	3/22/11 1700	1. [signature]	2. [signature]	3-22-11	2. [signature]
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 1.0°C 12.1°C

4.2

4

M98677: Chain of Custody
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ACCUTEST Laboratories

CHAIN OF CUSTODY

495 Tech Center West, Bldg. 1
Marlboro, MA 01752
508-481-6200 FAX: 508-481-6200

Accutest Job #: M98677

Client Information

~~EXXONMOBIL CORPORATION - Regional Laboratory Program Northeast~~

Consultants Company Name: LEA

Address: 100 Northwest Dr

City: Plainville State: CT Zip: 06062

Project Contact: Robin McKinney

Sampler's Name: N.E

Phone #: (860) 747-6181 Ext. Fax #:

AFE #:

Facility Information

Project Name: PHW EH Willow Pond Groundwater

Street: Job # 88UT059

City: East Hartford State: CT

ExxonMobil Contact:

ExxonMobil Contact Phone #:

Location ID#: WBS#:

PO#: Line#:

Analytical Information

BTEX 8260 ☐ 524 ☐ MTBE ☐ TBA ☐ Naphthalene ☐ Oxygenates ☐
8021 ☐ 524 ☐ STD ☐ TCL ☐ VOC AQUEOUS 8260 ☐ 624 ☐ 524 ☐ Oxygenates ☐ PPL ☐ MTBE ☐ TBA ☐ Oxygenates ☐
VOC SOIL 8260 ☐ STD ☐ TCL ☐ PPL ☐ MTBE ☐ TBA ☐ Oxygenates ☐ 5035/LOW ☐ 5035/MED ☐
VPH RANGES ☐ TARGETS ☐
EPH RANGES ☐ TARGET (PAH) ☐ DIESEL (PAH) ☐
TPH-CTDEP ☐ TPH418.1 ☐
TPH-MAINE GRO ☐ DRO ☐
TPH-8015 GRO ☐ TPH-8015 DRO ☐
METALS TOTAL ☐ DISSOLVED ☐ HM8 ☐ HM5 ☐
METALS TCLP ☐ SPLP ☐ HM8 ☐ HM5 ☐
~~EPH~~ ~~EPH~~ ~~EPH~~
CT EPH

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled by	Matrix	# of bottles	Preservation: HCL	NaOH	HNO3	H2SO4	MEOH	Encore	Other	None	CT EPH
-12	1167447	3/22/11	—	NE	GW	1								X	X

Turnaround Time (Business days)

- ☑ Std. 10 Business Days
- ☐ 8 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day EMERGENCY

Approved By:/Date

Emergency T/A is for FAX or Lablink Data

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Full Deliverables
- ☐ Other
- ☐ FULL CLP
- ☐ State Forms
- ☐ Disk Deliverable Format _____

Site Specific: QC Yes ☐ No ☐ If yes, indicate QC sample in Comments and submit triplicate volume.

Comments / Remarks

Add Sample to Report of Previous days Samples

1Gb

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1 William Emmons	3-23-11 1800	1 [illegible]	2 [illegible]	3-23-11 1800	2 [illegible]
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Seal #	Preserved where applicable ☐	On Ice ☑ Temp

M98677: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: M98677 **Client:** LEA **Immediate Client Services Action Required:** No

Date / Time Received: 3/22/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: WILLOW BROOK EAST HAVEN **No. Coolers:** 1 **Airbill #'s:** N/A

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	☐
2. Trip Blank listed on COC:	☑	☐	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

M98677: Chain of Custody
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Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Accutest New England **Client:** Loureiro Eng. Associates

Project Location: PWCTEH:Willow Brook - Pond W. East Hartford **Project Number:** 88UT059.0001

Sampling Date(s): 3/22/2011

Laboratory Sample ID(s): M98677-1, M98677-2, M98677-3, M98677-4, M98677-5, M98677-6, M98677-7, M98677-8, M98677-9, M98677-10, M98677-11, M98677-12, M98677-13, M98677-14, M98677-15, M98677-16, M98677-17, M98677-18, M98677-19, M98677-20, M98677-21, M98677-22, M98677-23

Methods: CT-ETPH 7/06, SW846 6010C, SW846 7196A, 7470A, 8082, 8260B

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☑ No ☐
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☑ No ☐

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: Lab Director

Printed Name: Reza Tand Date: 4/5/2011
Accutest New England

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98677

PWCTEH: Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98677-1 1167450	Collected: 22-MAR-11 09:00 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-1	SW846 8260B	01-APR-11 18:10	JP			V8260RCP
M98677-2 1167449	Collected: 22-MAR-11 15:30 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-2	SW846 7196A	22-MAR-11 20:35	MA			XCR
M98677-2	CT-ETPH 7/06	29-MAR-11 07:40	SS	25-MAR-11	AJ	BCTTPH
M98677-2	SW846 8082	30-MAR-11 22:55	AP	26-MAR-11	MT	P8082RCP
M98677-2	SW846 8260B	01-APR-11 18:38	JP			V8260RCP
M98677-3 1167449UF	Collected: 22-MAR-11 15:30 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-3	SW846 7470A	24-MAR-11 13:08	MA	24-MAR-11	MA	HG
M98677-3	SW846 6010C	29-MAR-11 21:15	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-4 1167443	Collected: 22-MAR-11 10:31 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-4	CT-ETPH 7/06	29-MAR-11 08:19	SS	25-MAR-11	AJ	BCTTPH
M98677-4	SW846 8082	30-MAR-11 23:17	AP	26-MAR-11	MT	P8082RCP
M98677-4	SW846 8260B	02-APR-11 14:23	TD			V8260RCP
M98677-5 1167443UF	Collected: 22-MAR-11 10:31 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-5	SW846 7470A	24-MAR-11 13:29	MA	24-MAR-11	MA	HG
M98677-5	SW846 6010C	29-MAR-11 21:19	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-6 1167444	Collected: 22-MAR-11 12:31 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-6	CT-ETPH 7/06	29-MAR-11 08:58	SS	25-MAR-11	AJ	BCTTPH
M98677-6	SW846 8082	30-MAR-11 23:40	AP	26-MAR-11	MT	P8082RCP
M98677-6	SW846 8260B	02-APR-11 15:48	TD			V8260RCP

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98677-7 1167444UF	Collected: 22-MAR-11 12:31 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-7	SW846 7470A	24-MAR-11 13:32	MA	24-MAR-11	MA	HG
M98677-7	SW846 6010C	29-MAR-11 21:24	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-8 1167445	Collected: 22-MAR-11 14:51 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-8	SW846 7196A	22-MAR-11 20:35	MA			XCR
M98677-8	CT-ETPH 7/06	29-MAR-11 09:37	SS	25-MAR-11	AJ	BCTTPH
M98677-8	SW846 8082	31-MAR-11 00:02	AP	26-MAR-11	MT	P8082RCP
M98677-8	SW846 8260B	02-APR-11 16:17	TD			V8260RCP
M98677-9 1167445UF	Collected: 22-MAR-11 14:51 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-9	SW846 7470A	24-MAR-11 13:34	MA	24-MAR-11	MA	HG
M98677-9	SW846 6010C	29-MAR-11 21:37	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-10 1167446	Collected: 22-MAR-11 11:50 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-10	SW846 7196A	22-MAR-11 20:35	MA			XCR
M98677-10	CT-ETPH 7/06	29-MAR-11 10:55	SS	25-MAR-11	AJ	BCTTPH
M98677-10	SW846 8082	31-MAR-11 00:24	AP	26-MAR-11	MT	P8082RCP
M98677-10	SW846 8260B	02-APR-11 19:06	TD			V8260RCP
M98677-10	SW846 8260B	04-APR-11 14:18	TD			V8260RCP
M98677-11 1167446UF	Collected: 22-MAR-11 11:50 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-11	SW846 7470A	24-MAR-11 13:36	MA	24-MAR-11	MA	HG
M98677-11	SW846 6010C	29-MAR-11 21:42	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98677-12 1167447	Collected: 22-MAR-11 14:30 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-12	SW846 7196A	22-MAR-11 20:35	MA			XCR
M98677-12	CT-ETPH 7/06	29-MAR-11 11:35	SS	25-MAR-11	AJ	BCTTPH
M98677-12	SW846 8082	31-MAR-11 00:46	AP	26-MAR-11	MT	P8082RCP
M98677-12	SW846 8260B	02-APR-11 16:45	TD			V8260RCP
M98677-13 1167447UF	Collected: 22-MAR-11 14:30 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-13	SW846 7470A	24-MAR-11 13:39	MA	24-MAR-11	MA	HG
M98677-13	SW846 6010C	29-MAR-11 21:46	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-14 1167448	Collected: 22-MAR-11 15:15 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-14	CT-ETPH 7/06	29-MAR-11 12:15	SS	25-MAR-11	AJ	BCTTPH
M98677-14	SW846 8082	31-MAR-11 01:08	AP	26-MAR-11	MT	P8082RCP
M98677-14	SW846 8260B	02-APR-11 17:13	TD			V8260RCP
M98677-15 1167448UF	Collected: 22-MAR-11 15:15 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-15	SW846 7470A	24-MAR-11 13:41	MA	24-MAR-11	MA	HG
M98677-15	SW846 6010C	29-MAR-11 21:02	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-16 1167451	Collected: 22-MAR-11 11:50 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-16	SW846 7196A	22-MAR-11 20:40	MA			XCR
M98677-16	CT-ETPH 7/06	29-MAR-11 12:54	SS	25-MAR-11	AJ	BCTTPH
M98677-16	SW846 8082	31-MAR-11 01:31	AP	26-MAR-11	MT	P8082RCP
M98677-16	SW846 8260B	02-APR-11 19:35	TD			V8260RCP
M98677-16	SW846 8260B	04-APR-11 14:46	TD			V8260RCP

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98677-17 1167451UF	Collected: 22-MAR-11 11:50 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-17	SW846 7470A	24-MAR-11 13:48	MA	24-MAR-11	MA	HG
M98677-17	SW846 6010C	29-MAR-11 21:51	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-18 1167442	Collected: 22-MAR-11 14:26 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-18	SW846 8082	30-MAR-11 20:20	CZ	29-MAR-11	CA	P8082RCP
M98677-18	CT-ETPH 7/06	01-APR-11 21:48	KD	26-MAR-11	AJ	BCTTPH
M98677-18	SW846 8260B	02-APR-11 17:42	TD			V8260RCP
M98677-19 1167442UF	Collected: 22-MAR-11 14:26 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-19	SW846 7470A	24-MAR-11 13:50	MA	24-MAR-11	MA	HG
M98677-19	SW846 6010C	29-MAR-11 21:55	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-20 1167441	Collected: 22-MAR-11 12:21 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-20	SW846 8082	30-MAR-11 20:35	CZ	29-MAR-11	CA	P8082RCP
M98677-20	CT-ETPH 7/06	01-APR-11 22:25	KD	26-MAR-11	AJ	BCTTPH
M98677-20	SW846 8260B	02-APR-11 18:10	TD			V8260RCP
M98677-21 1167441UF	Collected: 22-MAR-11 12:21 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-21	SW846 7470A	24-MAR-11 13:52	MA	24-MAR-11	MA	HG
M98677-21	SW846 6010C	29-MAR-11 22:00	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
M98677-22 1167440	Collected: 22-MAR-11 10:16 By: JCHG		Received: 22-MAR-11 By: JB			
M98677-22	SW846 8082	30-MAR-11 20:57	CZ	29-MAR-11	CA	P8082RCP

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M98677

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
M98677-22	CT-ETPH 7/06	01-APR-11 23:03	KD	26-MAR-11	AJ	BCTTPH
M98677-22	SW846 8260B	02-APR-11 18:38	TD			V8260RCP
M98677-23	Collected: 22-MAR-11 10:16 By: JCHG		Received: 22-MAR-11 By: JB			
1167440UF						
M98677-23	SW846 7470A	24-MAR-11 13:55	MA	24-MAR-11	MA	HG
M98677-23	SW846 6010C	29-MAR-11 22:04	DA	28-MAR-11	DA	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-MB	N50948.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-MB	N50948.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-MB	N50948.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	106%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-MB	R20337.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-MB	R20337.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-MB	R20337.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	86%	70-130%
2037-26-5	Toluene-D8	79%	70-130%
460-00-4	4-Bromofluorobenzene	83%	70-130%

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR743-MB	R20363.D	1	04/04/11	TD	n/a	n/a	MSR743

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-10, M98677-16

CAS No.	Compound	Result	RL	Units	Q
79-01-6	Trichloroethene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	88%	70-130%
2037-26-5	Toluene-D8	80%	70-130%
460-00-4	4-Bromofluorobenzene	85%	70-130%

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-BS	R20335.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	46.5	93	70-130
107-13-1	Acrylonitrile	50	263	526* [a]	70-130
71-43-2	Benzene	50	55.1	110	70-130
108-86-1	Bromobenzene	50	52.2	104	70-130
75-27-4	Bromodichloromethane	50	54.8	110	70-130
75-25-2	Bromoform	50	47.9	96	70-130
74-83-9	Bromomethane	50	52.8	106	70-130
78-93-3	2-Butanone (MEK)	50	49.4	99	70-130
104-51-8	n-Butylbenzene	50	55.8	112	70-130
135-98-8	sec-Butylbenzene	50	55.3	111	70-130
98-06-6	tert-Butylbenzene	50	54.9	110	70-130
75-15-0	Carbon disulfide	50	53.5	107	70-130
56-23-5	Carbon tetrachloride	50	57.9	116	70-130
108-90-7	Chlorobenzene	50	51.5	103	70-130
75-00-3	Chloroethane	50	54.2	108	70-130
67-66-3	Chloroform	50	54.7	109	70-130
74-87-3	Chloromethane	50	49.6	99	70-130
95-49-8	o-Chlorotoluene	50	56.4	113	70-130
106-43-4	p-Chlorotoluene	50	56.6	113	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	52.8	106	70-130
124-48-1	Dibromochloromethane	50	52.4	105	70-130
106-93-4	1,2-Dibromoethane	50	52.3	105	70-130
95-50-1	1,2-Dichlorobenzene	50	53.0	106	70-130
541-73-1	1,3-Dichlorobenzene	50	53.5	107	70-130
106-46-7	1,4-Dichlorobenzene	50	52.3	105	70-130
75-71-8	Dichlorodifluoromethane	50	56.7	113	70-130
75-34-3	1,1-Dichloroethane	50	55.8	112	70-130
107-06-2	1,2-Dichloroethane	50	54.2	108	70-130
75-35-4	1,1-Dichloroethene	50	59.0	118	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.7	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	56.1	112	70-130
78-87-5	1,2-Dichloropropane	50	54.6	109	70-130
142-28-9	1,3-Dichloropropane	50	52.8	106	70-130
594-20-7	2,2-Dichloropropane	50	61.9	124	70-130
563-58-6	1,1-Dichloropropene	50	59.4	119	70-130
10061-01-5	cis-1,3-Dichloropropene	50	50.8	102	70-130

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-BS	R20335.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	53.6	107	70-130
100-41-4	Ethylbenzene	50	56.4	113	70-130
76-13-1	Freon 113	50	59.7	119	70-130
87-68-3	Hexachlorobutadiene	50	56.0	112	70-130
591-78-6	2-Hexanone	50	42.4	85	70-130
98-82-8	Isopropylbenzene	50	63.6	127	70-130
99-87-6	p-Isopropyltoluene	50	59.4	119	70-130
1634-04-4	Methyl Tert Butyl Ether	50	54.1	108	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.9	100	70-130
74-95-3	Methylene bromide	50	52.9	106	70-130
75-09-2	Methylene chloride	50	50.0	100	70-130
91-20-3	Naphthalene	50	54.7	109	70-130
103-65-1	n-Propylbenzene	50	54.9	110	70-130
100-42-5	Styrene	50	52.0	104	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	53.1	106	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	52.2	104	70-130
127-18-4	Tetrachloroethene	50	54.4	109	70-130
109-99-9	Tetrahydrofuran	50	50.1	100	70-130
108-88-3	Toluene	50	53.8	108	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	48.1	96	70-130
87-61-6	1,2,3-Trichlorobenzene	50	54.7	109	70-130
120-82-1	1,2,4-Trichlorobenzene	50	55.2	110	70-130
71-55-6	1,1,1-Trichloroethane	50	55.9	112	70-130
79-00-5	1,1,2-Trichloroethane	50	53.5	107	70-130
79-01-6	Trichloroethene	50	56.3	113	70-130
75-69-4	Trichlorofluoromethane	50	56.1	112	70-130
96-18-4	1,2,3-Trichloropropane	50	52.7	105	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.7	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.5	105	70-130
75-01-4	Vinyl chloride	50	59.1	118	70-130
	m,p-Xylene	100	104	104	70-130
95-47-6	o-Xylene	50	51.6	103	70-130

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR742-BS	R20335.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	82%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSR743-BS	R20361.D	1	04/04/11	TD	n/a	n/a	MSR743

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-10, M98677-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-01-6	Trichloroethene	50	52.6	105	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	82%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-BS	N50945.D	1	04/01/11	JP	n/a	n/a	MSN1922
MSN1922-BSD	N50946.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	36.1	72	35.5	71	2	70-130/25
107-13-1	Acrylonitrile	50	199	398* [a]	193	386* [a]	3	70-130/25
71-43-2	Benzene	50	51.2	102	49.4	99	4	70-130/25
108-86-1	Bromobenzene	50	55.1	110	53.9	108	2	70-130/25
75-27-4	Bromodichloromethane	50	55.1	110	52.8	106	4	70-130/25
75-25-2	Bromoform	50	53.6	107	53.6	107	0	70-130/25
74-83-9	Bromomethane	50	45.5	91	44.1	88	3	70-130/25
78-93-3	2-Butanone (MEK)	50	46.0	92	48.8	98	6	70-130/25
104-51-8	n-Butylbenzene	50	57.1	114	55.1	110	4	70-130/25
135-98-8	sec-Butylbenzene	50	55.0	110	52.3	105	5	70-130/25
98-06-6	tert-Butylbenzene	50	54.5	109	52.3	105	4	70-130/25
75-15-0	Carbon disulfide	50	46.1	92	44.4	89	4	70-130/25
56-23-5	Carbon tetrachloride	50	60.0	120	54.6	109	9	70-130/25
108-90-7	Chlorobenzene	50	53.9	108	52.6	105	2	70-130/25
75-00-3	Chloroethane	50	41.7	83	38.9	78	7	70-130/25
67-66-3	Chloroform	50	48.3	97	46.7	93	3	70-130/25
74-87-3	Chloromethane	50	38.0	76	34.7	69* [b]	9	70-130/25
95-49-8	o-Chlorotoluene	50	50.7	101	49.4	99	3	70-130/25
106-43-4	p-Chlorotoluene	50	54.5	109	52.8	106	3	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	48.3	97	49.3	99	2	70-130/25
124-48-1	Dibromochloromethane	50	53.9	108	53.5	107	1	70-130/25
106-93-4	1,2-Dibromoethane	50	55.3	111	54.1	108	2	70-130/25
95-50-1	1,2-Dichlorobenzene	50	53.3	107	52.6	105	1	70-130/25
541-73-1	1,3-Dichlorobenzene	50	54.7	109	53.4	107	2	70-130/25
106-46-7	1,4-Dichlorobenzene	50	53.7	107	51.8	104	4	70-130/25
75-71-8	Dichlorodifluoromethane	50	32.4	65* [b]	31.7	63* [b]	2	70-130/25
75-34-3	1,1-Dichloroethane	50	43.6	87	42.2	84	3	70-130/25
107-06-2	1,2-Dichloroethane	50	47.9	96	48.0	96	0	70-130/25
75-35-4	1,1-Dichloroethene	50	49.6	99	50.0	100	1	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	48.0	96	47.7	95	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	48.0	96	47.9	96	0	70-130/25
78-87-5	1,2-Dichloropropane	50	47.8	96	47.0	94	2	70-130/25
142-28-9	1,3-Dichloropropane	50	50.3	101	51.1	102	2	70-130/25
594-20-7	2,2-Dichloropropane	50	48.0	96	44.8	90	7	70-130/25
563-58-6	1,1-Dichloropropene	50	53.0	106	51.7	103	2	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	50.1	100	48.3	97	4	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-BS	N50945.D	1	04/01/11	JP	n/a	n/a	MSN1922
MSN1922-BSD	N50946.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	53.4	107	52.0	104	3	70-130/25
100-41-4	Ethylbenzene	50	54.3	109	53.4	107	2	70-130/25
76-13-1	Freon 113	50	49.8	100	48.2	96	3	70-130/25
87-68-3	Hexachlorobutadiene	50	63.9	128	60.7	121	5	70-130/25
591-78-6	2-Hexanone	50	41.5	83	42.4	85	2	70-130/25
98-82-8	Isopropylbenzene	50	63.0	126	61.5	123	2	70-130/25
99-87-6	p-Isopropyltoluene	50	56.9	114	54.8	110	4	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	47.2	94	47.1	94	0	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	39.8	80	40.8	82	2	70-130/25
74-95-3	Methylene bromide	50	54.2	108	54.2	108	0	70-130/25
75-09-2	Methylene chloride	50	42.4	85	41.2	82	3	70-130/25
91-20-3	Naphthalene	50	50.5	101	51.3	103	2	70-130/25
103-65-1	n-Propylbenzene	50	55.0	110	52.0	104	6	70-130/25
100-42-5	Styrene	50	56.0	112	54.7	109	2	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	58.6	117	58.4	117	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	51.7	103	51.1	102	1	70-130/25
127-18-4	Tetrachloroethene	50	58.9	118	57.2	114	3	70-130/25
109-99-9	Tetrahydrofuran	50	35.6	71	36.3	73	2	70-130/25
108-88-3	Toluene	50	53.1	106	51.4	103	3	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	40.2	80	40.2	80	0	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	57.4	115	57.8	116	1	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	57.5	115	57.9	116	1	70-130/25
71-55-6	1,1,1-Trichloroethane	50	49.9	100	46.6	93	7	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.7	103	50.6	101	2	70-130/25
79-01-6	Trichloroethene	50	52.0	104	50.5	101	3	70-130/25
75-69-4	Trichlorofluoromethane	50	43.1	86	41.6	83	4	70-130/25
96-18-4	1,2,3-Trichloropropane	50	48.8	98	49.9	100	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	54.6	109	52.4	105	4	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	55.5	111	53.8	108	3	70-130/25
75-01-4	Vinyl chloride	50	43.3	87	42.2	84	3	70-130/25
	m,p-Xylene	100	113	113	111	111	2	70-130/25
95-47-6	o-Xylene	50	56.2	112	55.4	111	1	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1922-BS	N50945.D	1	04/01/11	JP	n/a	n/a	MSN1922
MSN1922-BSD	N50946.D	1	04/01/11	JP	n/a	n/a	MSN1922

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-1, M98677-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	95%	70-130%
2037-26-5	Toluene-D8	107%	107%	70-130%
460-00-4	4-Bromofluorobenzene	100%	99%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Blank Spike meets program technical requirements.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M98677-4MS	R20341.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4MSD	R20342.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4	R20340.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	M98677-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	230	92	239	96	4	70-130/30
107-13-1	Acrylonitrile	ND		250	1330	532* a	1390	556* a	4	70-130/30
71-43-2	Benzene	ND		250	265	106	280	112	6	70-130/30
108-86-1	Bromobenzene	ND		250	261	104	269	108	3	70-130/30
75-27-4	Bromodichloromethane	ND		250	267	107	277	111	4	70-130/30
75-25-2	Bromoform	ND		250	235	94	238	95	1	70-130/30
74-83-9	Bromomethane	ND		250	261	104	270	108	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	252	101	256	102	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	270	108	287	115	6	70-130/30
135-98-8	sec-Butylbenzene	ND		250	268	107	280	112	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	265	106	280	112	6	70-130/30
75-15-0	Carbon disulfide	ND		250	253	101	269	108	6	70-130/30
56-23-5	Carbon tetrachloride	ND		250	280	112	290	116	4	70-130/30
108-90-7	Chlorobenzene	ND		250	248	99	259	104	4	70-130/30
75-00-3	Chloroethane	ND		250	261	104	272	109	4	70-130/30
67-66-3	Chloroform	ND		250	272	109	282	113	4	70-130/30
74-87-3	Chloromethane	ND		250	243	97	254	102	4	70-130/30
95-49-8	o-Chlorotoluene	ND		250	273	109	287	115	5	70-130/30
106-43-4	p-Chlorotoluene	ND		250	275	110	286	114	4	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	261	104	267	107	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	258	103	266	106	3	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	253	101	265	106	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	264	106	274	110	4	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	260	104	274	110	5	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	258	103	268	107	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	282	113	290	116	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	271	108	284	114	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	274	110	281	112	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	281	112	298	119	6	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	260	104	272	109	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	267	107	287	115	7	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	266	106	275	110	3	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	258	103	270	108	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	301	120	306	122	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	279	112	295	118	6	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	248	99	261	104	5	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M98677-4MS	R20341.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4MSD	R20342.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4	R20340.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Compound	M98677-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	263	105	274	110	4	70-130/30
100-41-4	Ethylbenzene	ND		250	273	109	283	113	4	70-130/30
76-13-1	Freon 113	ND		250	297	119	309	124	4	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	278	111	294	118	6	70-130/30
591-78-6	2-Hexanone	ND		250	198	79	211	84	6	70-130/30
98-82-8	Isopropylbenzene	ND		250	301	120	321	128	6	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	290	116	302	121	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	270	108	279	112	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	249	100	254	102	2	70-130/30
74-95-3	Methylene bromide	ND		250	262	105	271	108	3	70-130/30
75-09-2	Methylene chloride	ND		250	251	100	262	105	4	70-130/30
91-20-3	Naphthalene	ND		250	262	105	283	113	8	70-130/30
103-65-1	n-Propylbenzene	ND		250	263	105	278	111	6	70-130/30
100-42-5	Styrene	ND		250	253	101	262	105	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	262	105	271	108	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	263	105	274	110	4	70-130/30
127-18-4	Tetrachloroethene	ND		250	258	103	272	109	5	70-130/30
109-99-9	Tetrahydrofuran	ND		250	251	100	272	109	8	70-130/30
108-88-3	Toluene	ND		250	259	104	270	108	4	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	239	96	244	98	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	263	105	280	112	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	271	108	284	114	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	276	110	283	113	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	265	106	273	109	3	70-130/30
79-01-6	Trichloroethene	ND		250	264	106	282	113	7	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	278	111	287	115	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	261	104	270	108	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	258	103	271	108	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	257	103	267	107	4	70-130/30
75-01-4	Vinyl chloride	ND		250	292	117	304	122	4	70-130/30
	m,p-Xylene	ND		500	504	101	525	105	4	70-130/30
95-47-6	o-Xylene	ND		250	248	99	260	104	5	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M98677-4MS	R20341.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4MSD	R20342.D	5	04/02/11	TD	n/a	n/a	MSR742
M98677-4	R20340.D	1	04/02/11	TD	n/a	n/a	MSR742

The QC reported here applies to the following samples: **Method:** SW846 8260B

M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16, M98677-18, M98677-20, M98677-22

CAS No.	Surrogate Recoveries	MS	MSD	M98677-4	Limits
1868-53-7	Dibromofluoromethane	83%	84%	87%	70-130%
2037-26-5	Toluene-D8	81%	82%	78%	70-130%
460-00-4	4-Bromofluorobenzene	88%	90%	82%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

Volatile Internal Standard Area Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSN1922-CC1860	**Injection Date:**	04/01/11
Lab File ID:	N50944.D	**Injection Time:**	10:58
Instrument ID:	GCMSN	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	179463	8.60	269923	9.46	157457	12.71	128037	15.27	78894	6.19
Upper Limit [a]	358926	9.10	539846	9.96	314914	13.21	256074	15.77	157788	6.69
Lower Limit [b]	89732	8.10	134962	8.96	78729	12.21	64019	14.77	39447	5.69

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1922-BS	182617	8.60	279187	9.46	161093	12.71	132796	15.27	83776	6.18
MSN1922-BSD	182838	8.60	279926	9.46	161055	12.71	132764	15.27	84194	6.18
MSN1922-MB	176020	8.60	267661	9.46	145802	12.71	112456	15.27	78737	6.19
ZZZZZZ	174442	8.60	263008	9.46	144582	12.71	114549	15.27	78418	6.19
ZZZZZZ	167311	8.60	257238	9.46	143308	12.71	109528	15.27	76223	6.19
ZZZZZZ	167840	8.60	253145	9.46	142435	12.71	113313	15.27	71890	6.19
M98676-14	165675	8.60	257811	9.46	142127	12.71	109336	15.27	68918	6.19
M98676-14MS	172801	8.60	265823	9.46	158303	12.71	128684	15.27	76655	6.18
M98676-14MSD	173895	8.60	267612	9.46	157574	12.71	129561	15.27	81734	6.18
ZZZZZZ	172737	8.60	265730	9.46	147506	12.71	109218	15.27	81342	6.19
ZZZZZZ	170586	8.60	262858	9.46	144688	12.71	108960	15.27	74289	6.19
ZZZZZZ	168335	8.60	259015	9.46	148318	12.71	122704	15.27	79017	6.19
ZZZZZZ	175461	8.60	270372	9.46	147193	12.71	112567	15.27	80273	6.19
M98677-1	172800	8.60	262756	9.46	145633	12.71	108154	15.27	74410	6.19
M98677-2	172465	8.60	262016	9.46	140526	12.71	107431	15.27	76558	6.19
ZZZZZZ	166792	8.60	256439	9.46	142478	12.71	104333	15.27	76935	6.19
ZZZZZZ	164511	8.60	248983	9.46	137091	12.71	101611	15.27	73780	6.19
ZZZZZZ	162777	8.60	247148	9.46	138796	12.71	102566	15.27	73508	6.19
ZZZZZZ	159617	8.60	242265	9.46	136537	12.71	99777	15.27	76354	6.19
ZZZZZZ	160718	8.60	242650	9.46	135627	12.71	97442	15.27	67292	6.18
ZZZZZZ	155302	8.60	239048	9.46	132054	12.71	98173	15.27	78433	6.19
ZZZZZZ	152436	8.60	230872	9.46	132933	12.71	98804	15.27	72963	6.19
ZZZZZZ	150204	8.60	231522	9.46	129791	12.71	94484	15.27	72312	6.19
ZZZZZZ	146434	8.60	226994	9.46	128178	12.71	91044	15.27	72885	6.19

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSR742-CC738	**Injection Date:**	04/02/11
Lab File ID:	R20335A.D	**Injection Time:**	11:39
Instrument ID:	GCMSR	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	207329	9.11	303075	9.99	152162	13.24	178908	15.80	57211	6.68
Upper Limit [a]	414658	9.61	606150	10.49	304324	13.74	357816	16.30	114422	7.18
Lower Limit [b]	103665	8.61	151538	9.49	76081	12.74	89454	15.30	28606	6.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSR742-BS	207329	9.11	303075	9.99	152162	13.24	178908	15.80	57211	6.68
MSR742-MB	188699	9.12	274698	9.99	127724	13.25	150630	15.81	53422	6.68
ZZZZZZ	175281	9.11	256532	9.98	124250	13.25	142609	15.81	43045	6.67
ZZZZZZ	178781	9.12	263088	9.99	124501	13.25	140944	15.81	42128	6.68
M98677-4	174016	9.12	258392	9.99	121227	13.25	140751	15.81	43523	6.68
M98677-4MS	191794	9.11	285617	9.98	144719	13.24	169601	15.80	48557	6.68
M98677-4MSD	199676	9.11	293396	9.98	148597	13.24	172592	15.80	52118	6.67
M98677-6	192449	9.12	282221	9.99	131739	13.25	153842	15.81	52584	6.68
M98677-8	182984	9.11	263274	9.99	126247	13.25	147894	15.81	59480	6.68
M98677-12	177778	9.11	264304	9.99	123965	13.25	143867	15.81	51834	6.68
M98677-14	173072	9.11	255897	9.99	120227	13.25	139547	15.81	45740	6.68
M98677-18	171354	9.11	255014	9.99	120725	13.25	139767	15.81	47483	6.68
M98677-20	170103	9.12	253962	9.99	122471	13.25	139698	15.81	47744	6.68
M98677-22	170417	9.12	249372	9.99	121102	13.25	136619	15.81	48951	6.68
M98677-10	178872	9.12	252693	9.99	123516	13.25	135503	15.81	49972	6.68
M98677-16	174179	9.11	250051	9.99	121416	13.25	134588	15.81	50762	6.68
ZZZZZZ	172176	9.11	253207	9.99	120385	13.25	148974	15.81	49238	6.68
ZZZZZZ	171026	9.12	250895	9.99	119484	13.25	136101	15.81	51304	6.68
ZZZZZZ	169482	9.12	250122	9.99	119191	13.25	135926	15.81	47649	6.68
ZZZZZZ	164584	9.11	243212	9.99	115494	13.25	132177	15.81	46886	6.68
ZZZZZZ	165229	9.12	242935	9.99	119317	13.25	132729	15.81	47179	6.68
ZZZZZZ	163301	9.12	243866	9.99	117203	13.25	129516	15.81	48784	6.68

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSR743-CC738	**Injection Date:**	04/04/11
Lab File ID:	R20360.D	**Injection Time:**	10:32
Instrument ID:	GCMSR	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	201728	9.11	301641	9.98	151796	13.24	173844	15.80	54885	6.68
Upper Limit [a]	403456	9.61	603282	10.48	303592	13.74	347688	16.30	109770	7.18
Lower Limit [b]	100864	8.61	150821	9.48	75898	12.74	86922	15.30	27443	6.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSR743-BS	214248	9.11	316633	9.99	157961	13.24	179330	15.80	57431	6.68
MSR743-MB	185997	9.11	279557	9.99	130053	13.25	149922	15.81	52328	6.68
ZZZZZZ	175723	9.11	262706	9.99	126520	13.25	144704	15.81	45581	6.67
ZZZZZZ	174941	9.12	258118	9.99	123759	13.25	140032	15.81	46152	6.68
ZZZZZZ	178313	9.11	277097	9.99	123944	13.25	140176	15.81	48926	6.68
M98677-10	178074	9.12	259414	9.99	123052	13.25	139110	15.81	48798	6.68
M98677-16	172837	9.11	254010	9.99	122230	13.25	136365	15.81	46249	6.68
ZZZZZZ	169336	9.11	251003	9.99	120530	13.25	134817	15.81	43211	6.68
ZZZZZZ	166694	9.11	248161	9.99	120043	13.25	134507	15.81	44324	6.68
ZZZZZZ	165239	9.12	249643	9.99	119605	13.25	134191	15.81	45037	6.68
M98845-2	177673	9.11	266655	9.99	128577	13.25	153181	15.80	46413	6.68
M98845-2MS	198166	9.11	292176	9.98	152121	13.24	172963	15.80	53901	6.68
M98845-2MSD	213332	9.11	317331	9.98	159665	13.24	181164	15.80	59398	6.68
ZZZZZZ	221443	9.11	322129	9.99	156841	13.25	177536	15.80	60346	6.68
ZZZZZZ	225947	9.11	323461	9.99	156837	13.25	179907	15.80	59496	6.68
ZZZZZZ	228911	9.11	333866	9.99	161511	13.25	186514	15.80	62854	6.68
ZZZZZZ	223724	9.11	328833	9.99	156163	13.25	181554	15.81	60893	6.68
ZZZZZZ	215794	9.11	319706	9.99	149424	13.25	174854	15.81	60374	6.68
ZZZZZZ	209511	9.12	304144	9.99	143154	13.25	167336	15.81	56671	6.68
ZZZZZZ	220427	9.11	318086	9.99	153932	13.25	181117	15.80	59631	6.68
ZZZZZZ	210408	9.11	313670	9.99	145662	13.25	171461	15.81	58793	6.68
ZZZZZZ	205323	9.11	300009	9.99	142747	13.25	164973	15.81	54462	6.68

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M98677-1	N50959.D	95.0	107.0	104.0
M98677-2	N50960.D	94.0	105.0	105.0
M98677-4	R20340.D	87.0	78.0	82.0
M98677-6	R20343.D	85.0	78.0	83.0
M98677-8	R20344.D	85.0	78.0	81.0
M98677-10	R20367.D	90.0	82.0	85.0
M98677-10	R20350.D	83.0	78.0	82.0
M98677-12	R20345.D	89.0	78.0	81.0
M98677-14	R20346.D	88.0	79.0	83.0
M98677-16	R20368.D	89.0	81.0	85.0
M98677-16	R20351.D	85.0	77.0	81.0
M98677-18	R20347.D	90.0	80.0	84.0
M98677-20	R20348.D	89.0	78.0	82.0
M98677-22	R20349.D	86.0	77.0	80.0
M98677-4MS	R20341.D	83.0	81.0	88.0
M98677-4MSD	R20342.D	84.0	82.0	90.0
MSN1922-BS	N50945.D	97.0	107.0	100.0
MSN1922-BSD	N50946.D	95.0	107.0	99.0
MSN1922-MB	N50948.D	94.0	106.0	101.0
MSR742-BS	R20335.D	83.0	82.0	89.0
MSR742-MB	R20337.D	86.0	79.0	83.0
MSR743-BS	R20361.D	83.0	82.0	93.0
MSR743-MB	R20363.D	88.0	80.0	85.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24441-MB	BC49830.D	1	03/28/11	SS	03/25/11	OP24441	GBC2402

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98677-2, M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	88%	50-149%

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24453-MB	BG26309.D	1	04/01/11	KD	03/26/11	OP24453	GBG889

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98677-18, M98677-20, M98677-22

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	91%	50-149%

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24454-MB	BE25159.D	1	03/30/11	AP	03/26/11	OP24454	GBE1455

The QC reported here applies to the following samples: **Method:** SW846 8082

M98677-2, M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	74%	30-150%
877-09-8	Tetrachloro-m-xylene	71%	30-150%
2051-24-3	Decachlorobiphenyl	61%	30-150%
2051-24-3	Decachlorobiphenyl	64%	30-150%

Method Blank Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24475-MB	YZ65247.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372

The QC reported here applies to the following samples: **Method:** SW846 8082

M98677-18, M98677-20, M98677-22

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	83%	30-150%
877-09-8	Tetrachloro-m-xylene	84%	30-150%
2051-24-3	Decachlorobiphenyl	56%	30-150%
2051-24-3	Decachlorobiphenyl	58%	30-150%

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24441-BS	BC49832.D	1	03/28/11	SS	03/25/11	OP24441	GBC2402

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98677-2, M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.523	75	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
3386-33-2	1-Chlorooctadecane	96%	50-149%

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24453-BS	BG26311.D	1	04/01/11	KD	03/26/11	OP24453	GBG889

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

M98677-18, M98677-20, M98677-22

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.649	93	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
3386-33-2	1-Chlorooctadecane	106%	50-149%

Blank Spike Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24454-BS	BE25160.D	1	03/30/11	AP	03/26/11	OP24454	GBE1455

The QC reported here applies to the following samples: **Method:** SW846 8082

M98677-2, M98677-4, M98677-6, M98677-8, M98677-10, M98677-12, M98677-14, M98677-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	4	2.9	73	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	4	2.6	65	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	68%	30-150%
877-09-8	Tetrachloro-m-xylene	63%	30-150%
2051-24-3	Decachlorobiphenyl	53%	30-150%
2051-24-3	Decachlorobiphenyl	56%	30-150%

Blank Spike/Blank Spike Duplicate Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24475-BS	YZ65248.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372
OP24475-BSD	YZ65249.D	1	03/30/11	CZ	03/29/11	OP24475	GYZ6372

The QC reported here applies to the following samples: **Method:** SW846 8082

M98677-18, M98677-20, M98677-22

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	2	1.8	90	2.0	100	11	40-140/20
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/20
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/20
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/20
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/20
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/20
11096-82-5	Aroclor 1260	2	1.7	85	2.0	100	16	40-140/20
37324-23-5	Aroclor 1262		ND		ND		nc	40-140/20
11100-14-4	Aroclor 1268		ND		ND		nc	40-140/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	86%	96%	30-150%
877-09-8	Tetrachloro-m-xylene	86%	96%	30-150%
2051-24-3	Decachlorobiphenyl	62%	71%	30-150%
2051-24-3	Decachlorobiphenyl	62%	71%	30-150%

Semivolatile Surrogate Recovery Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: CT-ETPH 7/06 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
M98677-2	BC49851.D	85.0
M98677-4	BC49852.D	81.0
M98677-6	BC49853.D	72.0
M98677-8	BC49854.D	76.0
M98677-10	BC49856.D	74.0
M98677-12	BC49857.D	85.0
M98677-14	BC49858.D	77.0
M98677-16	BC49859.D	74.0
M98677-18	BG26331.D	108.0
M98677-20	BG26333.D	78.0
M98677-22	BG26335.D	102.0
OP24441-BS	BC49832.D	96.0
OP24441-MB	BC49830.D	88.0
OP24453-BS	BG26311.D	106.0
OP24453-MB	BG26309.D	91.0

Surrogate Compounds	Recovery Limits
S1 = 1-Chlorooctadecane	50-149%

(a) Recovery from GC signal #1

Semivolatile Surrogate Recovery Summary

Job Number: M98677
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8082 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
M98677-2	BE25177.D	81.0	71.0	60.0	62.0
M98677-4	BE25178.D	70.0	64.0	54.0	56.0
M98677-6	BE25179.D	75.0	69.0	57.0	59.0
M98677-8	BE25180.D	58.0	207.0* [c]	55.0	57.0
M98677-10	BE25181.D	74.0	68.0	61.0	64.0
M98677-12	BE25182.D	82.0	81.0	67.0	71.0
M98677-14	BE25183.D	76.0	70.0	61.0	63.0
M98677-16	BE25184.D	90.0	70.0	62.0	65.0
M98677-18	YZ65254.D	71.0	70.0	68.0	68.0
M98677-20	YZ65255.D	74.0	72.0	68.0	68.0
M98677-22	YZ65256.D	76.0	73.0	59.0	59.0
OP24454-BS	BE25160.D	68.0	63.0	53.0	56.0
OP24454-MB	BE25159.D	74.0	71.0	61.0	64.0
OP24475-BS	YZ65248.D	86.0	86.0	62.0	62.0
OP24475-BSD	YZ65249.D	96.0	96.0	71.0	71.0
OP24475-MB	YZ65247.D	83.0	84.0	56.0	58.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to possible matrix interference.

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16760 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/24/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	0.0060	<0.20

Associated samples MP16760: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16760
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/24/11 03/24/11

Metal	M98677-3 Original	MS	Spikelot HGRWS1	% Rec	QC Limits	M98677-3 Original	DUP	RPD	QC Limits
Mercury	0.0	2.9	3	96.7	75-125	0.0	0.0	NC	0-20

Associated samples MP16760: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16760
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 03/24/11 03/24/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.8	3	93.3	3.5	20

Associated samples MP16760: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/28/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	19	40		
Antimony	6.0	.97	2		
Arsenic	4.0	.96	1.1	0.50	<4.0
Barium	50	.37	.5	1.1	<50
Beryllium	4.0	.23	.24		
Boron	100	.45	1.8		
Cadmium	4.0	.14	.17	0.10	<4.0
Calcium	5000	11	22		
Chromium	10	.6	.6	-0.80	<10
Cobalt	50	.16	.22		
Copper	25	1.1	2.5	1.6	<25
Gold	50	1.6	2.9		
Iron	100	6.7	8.5		
Lead	5.0	.94	1.4	-0.40	<5.0
Magnesium	5000	55	110		
Manganese	15	.11	.43		
Molybdenum	100	.3	.36		
Nickel	40	.19	.35	0.20	<40
Palladium	50	2.9	3.4		
Platinum	50	7.2	15		
Potassium	5000	46	52		
Selenium	10	1.5	1.6	1.0	<10
Silicon	100	1.4	18		
Silver	5.0	.77	1	0.10	<5.0
Sodium	5000	19	41		
Strontium	10	.19	.38		
Thallium	5.0	.67	.88		
Tin	100	.39	.47		
Titanium	50	.59	1		
Tungsten	100	8.9	13		
Vanadium	10	.84	1.5		
Zinc	20	.3	.61	1.1	<20

Associated samples MP16782: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				03/28/11					03/28/11
Metal	M98677-15 Original MS		Spikelot MPICP	% Rec	QC Limits	M98677-15 Original DUP		RPD	QC Limits
Aluminum									
Antimony									
Arsenic	0.0	499	500	99.8	75-125	0.0	0.0	NC	0-20
Barium	49.1	1970	2000	96.0	75-125	49.1	50.6	3.0	0-20
Beryllium									
Boron									
Cadmium	0.0	501	500	100.2	75-125	0.0	0.0	NC	0-20
Calcium									
Chromium	0.0	475	500	95.0	75-125	0.0	0.0	NC	0-20
Cobalt									
Copper	5.2	477	500	94.4	75-125	5.2	4.9	5.9	0-20
Gold									
Iron									
Lead	0.0	966	1000	96.6	75-125	0.0	0.0	NC	0-20
Magnesium									
Manganese									
Molybdenum									
Nickel	0.90	500	500	99.8	75-125	0.90	0.90	0.0	0-20
Palladium									
Platinum									
Potassium									
Selenium	0.0	498	500	99.6	75-125	0.0	0.0	NC	0-20
Silicon									
Silver	0.0	203	200	101.5	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	12.9	507	500	98.8	75-125	12.9	12.2	5.6	0-20

Associated samples MP16782: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			03/28/11					03/28/11	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	496	500	99.2	80-120	489	500	97.8	1.4	20
Barium	1950	2000	97.5	80-120	1900	2000	95.0	2.6	20
Beryllium									
Boron									
Cadmium	497	500	99.4	80-120	488	500	97.6	1.8	20
Calcium									
Chromium	476	500	95.2	80-120	472	500	94.4	0.8	20
Cobalt									
Copper	473	500	94.6	80-120	469	500	93.8	0.8	20
Gold									
Iron									
Lead	969	1000	96.9	80-120	953	1000	95.3	1.7	20
Magnesium									
Manganese									
Molybdenum									
Nickel	500	500	100.0	80-120	495	500	99.0	1.0	20
Palladium									
Platinum									
Potassium									
Selenium	495	500	99.0	80-120	485	500	97.0	2.0	20
Silicon									
Silver	202	200	101.0	80-120	205	200	102.5	1.5	20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	499	500	99.8	80-120	490	500	98.0	1.8	20

Associated samples MP16782: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.3

7

SERIAL DILUTION RESULTS SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/28/11

Metal	M98677-15 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	49.1	53.0	7.9	0-10
Beryllium				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	5.20	10.9	109.6(a)	0-10
Gold				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	0.900	1.10	22.2 (a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	12.9	14.2	10.1 (a)	0-10

Associated samples MP16782: M98677-3, M98677-5, M98677-7, M98677-9, M98677-11, M98677-13, M98677-15, M98677-17, M98677-19, M98677-21, M98677-23

SERIAL DILUTION RESULTS SUMMARY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP16782
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN34411	0.010	0.0	mg/l	.1	0.10	100.0	85-115%

Associated Samples:
Batch GN34411: M98677-10, M98677-12, M98677-16, M98677-2, M98677-8
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chromium, Hexavalent	GN34411	mg/l	.1	0.10	0.0	20%

Associated Samples:
Batch GN34411: M98677-10, M98677-12, M98677-16, M98677-2, M98677-8
(*) Outside of QC limits

8.2
8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN34411	M98677-2	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GN34411: M98677-10, M98677-12, M98677-16, M98677-2, M98677-8
(*) Outside of QC limits

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M98677
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN34411	M98677-2	mg/l	0.0	.1	0.098	98.0	85-115%

Associated Samples:
Batch GN34411: M98677-10, M98677-12, M98677-16, M98677-2, M98677-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

8.4
8

New England ACCUTEST LABORATORIES

06/29/11

Technical Report for

Loureiro Eng. Associates

PWCTEH:Northwest GW/SW Study

88UT922.001

Accutest Job Number: MC1274

Sampling Date: 06/21/11

Report to:

Loureiro Engineering Associates
100 Northwest Drive
Plainville, CT 06062
jttrzaski@loureiro.com

ATTN: Joe Trzaski

Total number of pages in report: **89**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

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Accutest Laboratories

Sample Summary

Loureiro Eng. Associates

Job No: MC1274

PWCTEH:Northwest GW/SW Study
Project No: 88UT922.001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC1274-1	06/21/11	10:35	LC	06/21/11	AQ	Ground Water	1230736
MC1274-2	06/21/11	10:35	LC	06/21/11	AQ	Ground Water	1230736UF
MC1274-3	06/21/11	12:15	LC	06/21/11	AQ	Ground Water	1230737
MC1274-4	06/21/11	12:15	LC	06/21/11	AQ	Ground Water	1230737UF
MC1274-5	06/21/11	13:30	LC	06/21/11	AQ	Ground Water	1230738
MC1274-6	06/21/11	13:30	LC	06/21/11	AQ	Ground Water	1230738UF
MC1274-7	06/21/11	14:40	LC	06/21/11	AQ	Ground Water	1230739
MC1274-8	06/21/11	14:40	LC	06/21/11	AQ	Ground Water	1230739UF
MC1274-9	06/21/11	12:00	LC	06/21/11	AQ	Ground Water	1230745
MC1274-10	06/21/11	12:00	LC	06/21/11	AQ	Ground Water	1230745UF
MC1274-11	06/21/11	09:00	LC	06/21/11	AQ	Ground Water	1230746
MC1274-12	06/21/11	11:10	LC	06/21/11	AQ	Ground Water	1230740
MC1274-13	06/21/11	11:10	LC	06/21/11	AQ	Ground Water	1230740UF

Accutest Laboratories

Sample Summary
(continued)

Loureiro Eng. Associates

Job No: MC1274

PWCTEH:Northwest GW/SW Study
Project No: 88UT922.001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC1274-14	06/21/11	12:15	LC	06/21/11	AQ	Ground Water	1230741
MC1274-15	06/21/11	12:15	LC	06/21/11	AQ	Ground Water	1230741UF
MC1274-16	06/21/11	14:15	LC	06/21/11	AQ	Ground Water	1230742
MC1274-17	06/21/11	14:15	LC	06/21/11	AQ	Ground Water	1230742UF
MC1274-18	06/21/11	15:40	LC	06/21/11	AQ	Ground Water	1230743
MC1274-19	06/21/11	15:40	LC	06/21/11	AQ	Ground Water	1230743UF
MC1274-20	06/21/11	12:15	LC	06/21/11	AQ	Ground Water	1230744UF
MC1274-21	06/21/11	13:30	LC	06/21/11	AQ	Ground Water	1230747

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Loureiro Eng. Associates	**Job No**	MC1274
Site:	PWCTEH:Northwest GW/SW Study	**Report Date**	6/29/2011 11:53:40 AM

21 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 06/21/2011 and were received at Accutest on 06/21/2011 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of MC1274. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSL1805

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MSL1805-BS for Bromomethane: Outside control limits. Blank Spike meets program technical requirements.
- MSL1805-BS for Trans-1,4-Dichloro-2-Butene: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSL1805-CC1764 for bromomethane, trans-1,4-dichloro-2-butene exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration verification standard MSL1764-ICV1764 for acetonitrile, 2-butanone exceeds 35% Difference.
- Quadratic regression is employed for initial calibration standard MSL1764-ICC1764 for chloromethane, acetonitrile, freon-113, methyl tert butyl ether, carbon tetrachloride.

Matrix AQ **Batch ID:** MSL1806

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MSL1806-BS for Bromomethane: Outside control limits. Blank Spike meets program technical requirements.
- MSL1806-BS for Trans-1,4-Dichloro-2-Butene: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSL1806-CC1764 for bromomethane, trans-1,4-dichloro-2-butene, 1,2,3-trichloropropane exceed 30% Difference. This check standard met RCP criteria.

Matrix AQ **Batch ID:** MSL1808

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC1274-7MS, MC1274-7MSD were used as the QC samples indicated.
- MSL1808-BS for Bromomethane: Outside control limits. Blank Spike meets program technical requirements.
- MSL1806-BS for Trans-1,4-Dichloro-2-Butene: Outside control limits. Associated samples are non-detect for this compound.
- MC1274-7MS/MSD for Bromomethane: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC1274-3: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.
- MC1274-7MS/MSD for Trans-1,4-Dichloro-2-Butene: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSL1808-CC1764 for bromomethane, trans-1,4-dichloro-2-butene exceed 30% Difference. This check standard met RCP criteria.

Wet Chemistry By Method SW846 7196A

Matrix	AQ	Batch ID:	GN35247

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC1274-10DUP, MC1274-10MS were used as the QC samples for Chromium, Hexavalent.

Accutest may not have met all requested limits due to methodology limitations, sample matrix, dilutions, or percents solids.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC1274).

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1230736		
Lab Sample ID:	MC1274-1	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54306.D	1	06/26/11	AMY	n/a	n/a	MSL1805
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	8.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	9.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230736		
Lab Sample ID:	MC1274-1	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	3.0	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	6.9	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	7.7	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230736		
Lab Sample ID:	MC1274-1	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230736UF		
Lab Sample ID:	MC1274-2	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:30	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230737		
Lab Sample ID:	MC1274-3	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54307.D	1	06/26/11	AMY	n/a	n/a	MSL1805
Run #2 [a]	L54384.D	10	06/27/11	AMY	n/a	n/a	MSL1808

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.82	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	24.6	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	42.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	7.3	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	553 [b]	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.3	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230737		
Lab Sample ID:	MC1274-3	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	280 [b]	10	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	13.7	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	226	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	88.4	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	93%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230737		
Lab Sample ID:	MC1274-3	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	95%	105%	70-130%
460-00-4	4-Bromofluorobenzene	89%	97%	70-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230737UF		
Lab Sample ID:	MC1274-4	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:30	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230738		
Lab Sample ID:	MC1274-5	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54308.D	1	06/26/11	AMY	n/a	n/a	MSL1805
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.60	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	34.5	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	12.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	30.3	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	42.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.2	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230738		
Lab Sample ID:	MC1274-5	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	6.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	42.7	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	14.8	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	63.8	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	12.3	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230738		
Lab Sample ID:	MC1274-5	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230738UF		
Lab Sample ID:	MC1274-6	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230739		
Lab Sample ID:	MC1274-7	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54381.D	1	06/27/11	AMY	n/a	n/a	MSL1808
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230739		
Lab Sample ID:	MC1274-7	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230739		
Lab Sample ID:	MC1274-7	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230739UF		
Lab Sample ID:	MC1274-8	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230745		
Lab Sample ID:	MC1274-9	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54310.D	1	06/26/11	AMY	n/a	n/a	MSL1805
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230745		
Lab Sample ID:	MC1274-9	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230745		
Lab Sample ID:	MC1274-9	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230745UF		
Lab Sample ID:	MC1274-10	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:30	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230746		
Lab Sample ID:	MC1274-11	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54324.D	1	06/26/11	AMY	n/a	n/a	MSL1806
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230746		
Lab Sample ID:	MC1274-11	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230746		
Lab Sample ID:	MC1274-11	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230740		
Lab Sample ID:	MC1274-12	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54335.D	1	06/26/11	AMY	n/a	n/a	MSL1806
Run #2	L54385.D	10	06/27/11	AMY	n/a	n/a	MSL1808

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	7.7	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	4.1	2.0	ug/l	
67-66-3	Chloroform	11.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	12.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	21.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	684 [a]	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.7	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230740		
Lab Sample ID:	MC1274-12	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	2.1	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	283 [a]	10	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	35.6	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	2100 [a]	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	144	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	86%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230740		
Lab Sample ID:	MC1274-12	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%	93%	70-130%
460-00-4	4-Bromofluorobenzene	91%	87%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230740UF		
Lab Sample ID:	MC1274-13	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230741		
Lab Sample ID:	MC1274-14	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54382.D	1	06/27/11	AMY	n/a	n/a	MSL1808
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230741		
Lab Sample ID:	MC1274-14	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	9.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	5.0	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230741		
Lab Sample ID:	MC1274-14	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230741UF		
Lab Sample ID:	MC1274-15	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.095	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230742		
Lab Sample ID:	MC1274-16	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54337.D	1	06/26/11	AMY	n/a	n/a	MSL1806
Run #2	L54386.D	5	06/27/11	AMY	n/a	n/a	MSL1808

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.64	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	6.9	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	14.5	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	5.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	13.8	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	93.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230742		
Lab Sample ID:	MC1274-16	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	180	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	13.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	784 [a]	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	3.0	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	96%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230742		
Lab Sample ID:	MC1274-16	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%	105%	70-130%
460-00-4	4-Bromofluorobenzene	92%	97%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230742UF		
Lab Sample ID:	MC1274-17	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.054	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230743		
Lab Sample ID:	MC1274-18	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54338.D	1	06/26/11	AMY	n/a	n/a	MSL1806
Run #2	L54387.D	20	06/27/11	AMY	n/a	n/a	MSL1808

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	14.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	6.8	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	57.3	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	16.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	56.7	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1490 [a]	20	ug/l	
156-60-5	trans-1,2-Dichloroethene	4.4	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230743		
Lab Sample ID:	MC1274-18	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	132	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	57.2	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	2.5	1.0	ug/l	
79-01-6	Trichloroethene	4970 [a]	20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	103	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	1.1	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	88%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230743		
Lab Sample ID:	MC1274-18	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%	94%	70-130%
460-00-4	4-Bromofluorobenzene	92%	89%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230743UF		
Lab Sample ID:	MC1274-19	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230744UF		
Lab Sample ID:	MC1274-20	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
		Percent Solids:	n/a
Project:	PWCTEH:Northwest GW/SW Study		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.095	0.010	mg/l	1	06/21/11 19:35	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1230747		
Lab Sample ID:	MC1274-21	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L54339.D	1	06/26/11	AMY	n/a	n/a	MSL1806
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.54	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	39.6	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	13.7	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	43.2	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	54.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.4	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230747		
Lab Sample ID:	MC1274-21	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	6.1	1.0	ug/l	
109-99-9	Tetrahydrofuran	36.5	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	16.9	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	110	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	16.9	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1230747		
Lab Sample ID:	MC1274-21	**Date Sampled:**	06/21/11
Matrix:	AQ - Ground Water	**Date Received:**	06/21/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Northwest GW/SW Study		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle

ACCUTEST Laboratories

1 of 2

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: MC1274
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Joe Trzask, LEA
ADDRESS: 100 Northwest Dr
CITY: Plainville, STATE: CT ZIP: 06062
SEND REPORT TO:
PHONE #: 860-747-6181

FACILITY INFORMATION

PROJECT NAME: UTC PWEH NW GW Surface water study
LOCATION: East Hartford, CT
PROJECT NO.: 88UT922
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE # MC1274	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	Hex Chrome	LAB USE ONLY
-1	1230736	6-21-11	1035	LC	GW	2	X					X		
-2	1230736uf		1035			1				X			X	
-3	1230737		1215			2	X					X		
-4	1230737uf		1215			1				X			X	
-5	1230738		1330			2	X					X		
-6	1230738uf		1330			1				X			X	
-7	1230739		1440			2	X					X		
-8	1230739uf		1440			1				X			X	
-9	1230745		1200			2	X					X		
-10	1230745uf		1200			1				X			X	
-11	1230746	6-21-11	0900	LC	GW	1	X					X		

DATA TURNAROUND INFORMATION

- [X] 14 DAYS STANDARD — APPROVED BY:
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [X] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [X] OTHER (SPECIFY) EPP

COMMENTS/REMARKS

CT RCP deliverable
Loc 3C, 15S

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME: 6-21-11 1530	RECEIVED BY: 1.	RELINQUISHED BY: 2.	DATE TIME: 6-21-11 1900	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE °C 22.2°C

4.1 4

MC1274: Chain of Custody
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ACCUTEST Laboratories 2 of 2

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: MC1274
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Loureiro Engineering Associates
ADDRESS: 100 Northwest Drive
CITY, STATE: Plainville CT ZIP: 06062
SEND REPORT TO: Joe Trzaski
PHONE #: 860-747-6181

FACILITY INFORMATION

PROJECT NAME: UTC P&W Northwest Area
LOCATION: East Hartford, CT
PROJECT NO.: 88UT922
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES: DW - DRINKING WATER; GW - GROUND WATER; WW - WASTE WATER; SO - SOIL; SL - SLUDGE; OI - OIL; LIQ - OTHER LIQUID; SOL - OTHER SOLID

ACCUTEST SAMPLE # MC1274	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	Hex Chrome	LAB USE ONLY
-12	1230740	6/21/11	11:10	JM	GW	2	X					X		
-13	1230740uf	6/21/11	11:10	JM	GW	1					X		X	
-14	1230741	6/21/11	12:15	JM	GW	2	X					X		
-15	1230741uf	6/21/11	12:15	JM	GW	1					X		X	
-16	1230742	6/21/11	14:15	JM	GW	2	X					X		
-17	1230742uf	6/21/11	14:15	JM	GW	1					X		X	
-18	1230743	6/21/11	15:40	JM	GW	2	X					X		
-19	1230743uf	6/21/11	15:40	JM	GW	1					X		X	
JM	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~					~~[illegible]~~		
-20	1230744uf	6/21/11	12:15	JM	GW	1					X		X	
-21	1230747	6/21/	13:30	LC	GW	2	X					X		

DATA TURNAROUND INFORMATION

- [X] 14 DAYS STANDARD
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [X] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [X] OTHER (SPECIFY) EDD

COMMENTS/REMARKS

CT RCP Deliverable.

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. [signature]	6/21/11 1530	1. [signature]	2. B.C	6-21-11 1900	2. B.C
3.		3.	4.		4.
5.		5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 2.6 2.2 °C

4.1

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MC1274: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC1274 **Client:** LEA **Immediate Client Services Action Required:** No

Date / Time Received: 6/21/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: E HART **No. Coolers:** 2 **Airbill #'s:**

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservatio	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC1274: Chain of Custody
Page 3 of 3

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Accutest New England **Client:** Loureiro Eng. Associates

Project Location: PWCTEH:Northwest GW/SW Study **Project Number:** 88UT922.001

Sampling Date(s): 6/21/2011

Laboratory Sample ID(s): MC1274-1, MC1274-2, MC1274-3, MC1274-4, MC1274-5, MC1274-6, MC1274-7, MC1274-8, MC1274-9, MC1274-10, MC1274-11, MC1274-12, MC1274-13, MC1274-14, MC1274-15, MC1274-16, MC1274-17, MC1274-18, MC1274-19, MC1274-20, MC1274-21

Methods: SW846 7196A, SW846 8260B

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☐ No ☑
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☑ No ☐
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☑ No ☐

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: Lab Director

Printed Name: Reza Tand Date: 6/29/2011
Accutest New England

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC1274

PWCTEH:Northwest GW/SW Study
Project No: 88UT922.001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC1274-1 1230736	Collected: 21-JUN-11 10:35 By: LC		Received: 21-JUN-11 By: JB			
MC1274-1	SW846 8260B	26-JUN-11 01:14	AMY			V8260RCP
MC1274-2 1230736UF	Collected: 21-JUN-11 10:35 By: LC		Received: 21-JUN-11 By: JB			
MC1274-2	SW846 7196A	21-JUN-11 19:30	MA			XCR
MC1274-3 1230737	Collected: 21-JUN-11 12:15 By: LC		Received: 21-JUN-11 By: JB			
MC1274-3	SW846 8260B	26-JUN-11 01:44	AMY			V8260RCP
MC1274-3	SW846 8260B	27-JUN-11 18:07	AMY			V8260RCP
MC1274-4 1230737UF	Collected: 21-JUN-11 12:15 By: LC		Received: 21-JUN-11 By: JB			
MC1274-4	SW846 7196A	21-JUN-11 19:30	MA			XCR
MC1274-5 1230738	Collected: 21-JUN-11 13:30 By: LC		Received: 21-JUN-11 By: JB			
MC1274-5	SW846 8260B	26-JUN-11 02:13	AMY			V8260RCP
MC1274-6 1230738UF	Collected: 21-JUN-11 13:30 By: LC		Received: 21-JUN-11 By: JB			
MC1274-6	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-7 1230739	Collected: 21-JUN-11 14:40 By: LC		Received: 21-JUN-11 By: JB			
MC1274-7	SW846 8260B	27-JUN-11 16:39	AMY			V8260RCP
MC1274-8 1230739UF	Collected: 21-JUN-11 14:40 By: LC		Received: 21-JUN-11 By: JB			
MC1274-8	SW846 7196A	21-JUN-11 19:35	MA			XCR

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC1274

PWCTEH:Northwest GW/SW Study
Project No: 88UT922.001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC1274-9	Collected: 21-JUN-11 12:00 By: LC		Received: 21-JUN-11 By: JB			
1230745						
MC1274-9	SW846 8260B	26-JUN-11 03:13	AMY			V8260RCP
MC1274-10	Collected: 21-JUN-11 12:00 By: LC		Received: 21-JUN-11 By: JB			
1230745UF						
MC1274-10	SW846 7196A	21-JUN-11 19:30	MA			XCR
MC1274-11	Collected: 21-JUN-11 09:00 By: LC		Received: 21-JUN-11 By: JB			
1230746						
MC1274-11	SW846 8260B	26-JUN-11 12:50	AMY			V8260RCP
MC1274-12	Collected: 21-JUN-11 11:10 By: LC		Received: 21-JUN-11 By: JB			
1230740						
MC1274-12	SW846 8260B	26-JUN-11 18:08	AMY			V8260RCP
MC1274-12	SW846 8260B	27-JUN-11 18:37	AMY			V8260RCP
MC1274-13	Collected: 21-JUN-11 11:10 By: LC		Received: 21-JUN-11 By: JB			
1230740UF						
MC1274-13	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-14	Collected: 21-JUN-11 12:15 By: LC		Received: 21-JUN-11 By: JB			
1230741						
MC1274-14	SW846 8260B	27-JUN-11 17:07	AMY			V8260RCP
MC1274-15	Collected: 21-JUN-11 12:15 By: LC		Received: 21-JUN-11 By: JB			
1230741UF						
MC1274-15	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-16	Collected: 21-JUN-11 14:15 By: LC		Received: 21-JUN-11 By: JB			
1230742						

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC1274

PWCTEH:Northwest GW/SW Study
Project No: 88UT922.001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC1274-16	SW846 8260B	26-JUN-11 19:07	AMY			V8260RCP
MC1274-16	SW846 8260B	27-JUN-11 19:07	AMY			V8260RCP
MC1274-17	Collected: 21-JUN-11 14:15 By: LC		Received: 21-JUN-11 By: JB			
1230742UF						
MC1274-17	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-18	Collected: 21-JUN-11 15:40 By: LC		Received: 21-JUN-11 By: JB			
1230743						
MC1274-18	SW846 8260B	26-JUN-11 19:35	AMY			V8260RCP
MC1274-18	SW846 8260B	27-JUN-11 19:37	AMY			V8260RCP
MC1274-19	Collected: 21-JUN-11 15:40 By: LC		Received: 21-JUN-11 By: JB			
1230743UF						
MC1274-19	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-20	Collected: 21-JUN-11 12:15 By: LC		Received: 21-JUN-11 By: JB			
1230744UF						
MC1274-20	SW846 7196A	21-JUN-11 19:35	MA			XCR
MC1274-21	Collected: 21-JUN-11 13:30 By: LC		Received: 21-JUN-11 By: JB			
1230747						
MC1274-21	SW846 8260B	26-JUN-11 20:04	AMY			V8260RCP

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-MB	L54291.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-MB	L54291.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-MB	L54291.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	88%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-MB	L54320.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-MB	L54320.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-MB	L54320.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-MB	L54380.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-MB	L54380.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-MB	L54380.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-BS	L54289.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	47.2	94	70-130
107-13-1	Acrylonitrile	50	41.3	83	70-130
71-43-2	Benzene	50	49.4	99	70-130
108-86-1	Bromobenzene	50	45.1	90	70-130
75-27-4	Bromodichloromethane	50	55.3	111	70-130
75-25-2	Bromoform	50	56.5	113	70-130
74-83-9	Bromomethane	50	24.8	50* [a]	70-130
78-93-3	2-Butanone (MEK)	50	49.5	99	70-130
104-51-8	n-Butylbenzene	50	45.6	91	70-130
135-98-8	sec-Butylbenzene	50	45.5	91	70-130
98-06-6	tert-Butylbenzene	50	45.5	91	70-130
75-15-0	Carbon disulfide	50	45.9	92	70-130
56-23-5	Carbon tetrachloride	50	50.5	101	70-130
108-90-7	Chlorobenzene	50	45.0	90	70-130
75-00-3	Chloroethane	50	43.9	88	70-130
67-66-3	Chloroform	50	46.3	93	70-130
74-87-3	Chloromethane	50	41.9	84	70-130
95-49-8	o-Chlorotoluene	50	43.2	86	70-130
106-43-4	p-Chlorotoluene	50	45.9	92	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	55.5	111	70-130
124-48-1	Dibromochloromethane	50	49.3	99	70-130
106-93-4	1,2-Dibromoethane	50	46.3	93	70-130
95-50-1	1,2-Dichlorobenzene	50	46.9	94	70-130
541-73-1	1,3-Dichlorobenzene	50	46.7	93	70-130
106-46-7	1,4-Dichlorobenzene	50	43.9	88	70-130
75-71-8	Dichlorodifluoromethane	50	57.9	116	70-130
75-34-3	1,1-Dichloroethane	50	52.1	104	70-130
107-06-2	1,2-Dichloroethane	50	49.3	99	70-130
75-35-4	1,1-Dichloroethene	50	41.9	84	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.0	96	70-130
156-60-5	trans-1,2-Dichloroethene	50	45.2	90	70-130
78-87-5	1,2-Dichloropropane	50	51.8	104	70-130
142-28-9	1,3-Dichloropropane	50	49.1	98	70-130
594-20-7	2,2-Dichloropropane	50	51.9	104	70-130
563-58-6	1,1-Dichloropropene	50	45.7	91	70-130
10061-01-5	cis-1,3-Dichloropropene	50	51.5	103	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-BS	L54289.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	59.0	118	70-130
100-41-4	Ethylbenzene	50	44.4	89	70-130
76-13-1	Freon 113	50	49.4	99	70-130
87-68-3	Hexachlorobutadiene	50	46.0	92	70-130
591-78-6	2-Hexanone	50	46.7	93	70-130
98-82-8	Isopropylbenzene	50	49.2	98	70-130
99-87-6	p-Isopropyltoluene	50	47.1	94	70-130
1634-04-4	Methyl Tert Butyl Ether	50	51.7	103	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.8	102	70-130
74-95-3	Methylene bromide	50	52.8	106	70-130
75-09-2	Methylene chloride	50	42.9	86	70-130
91-20-3	Naphthalene	50	44.6	89	70-130
103-65-1	n-Propylbenzene	50	44.3	89	70-130
100-42-5	Styrene	50	44.2	88	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.3	103	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.1	98	70-130
127-18-4	Tetrachloroethene	50	45.1	90	70-130
109-99-9	Tetrahydrofuran	50	55.8	112	70-130
108-88-3	Toluene	50	47.3	95	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	96.8	194* [b]	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.8	92	70-130
120-82-1	1,2,4-Trichlorobenzene	50	48.2	96	70-130
71-55-6	1,1,1-Trichloroethane	50	48.7	97	70-130
79-00-5	1,1,2-Trichloroethane	50	52.5	105	70-130
79-01-6	Trichloroethene	50	48.8	98	70-130
75-69-4	Trichlorofluoromethane	50	40.8	82	70-130
96-18-4	1,2,3-Trichloropropane	50	61.5	123	70-130
95-63-6	1,2,4-Trimethylbenzene	50	45.0	90	70-130
108-67-8	1,3,5-Trimethylbenzene	50	44.3	89	70-130
75-01-4	Vinyl chloride	50	47.1	94	70-130
	m,p-Xylene	100	87.2	87	70-130
95-47-6	o-Xylene	50	44.9	90	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1805-BS	L54289.D	1	06/25/11	AMY	n/a	n/a	MSL1805

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-1, MC1274-3, MC1274-5, MC1274-9

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	86%	70-130%
460-00-4	4-Bromofluorobenzene	83%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-BS	L54318.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	49.9	100	70-130
107-13-1	Acrylonitrile	50	44.1	88	70-130
71-43-2	Benzene	50	48.5	97	70-130
108-86-1	Bromobenzene	50	44.4	89	70-130
75-27-4	Bromodichloromethane	50	55.3	111	70-130
75-25-2	Bromoform	50	55.1	110	70-130
74-83-9	Bromomethane	50	28.7	57* [a]	70-130
78-93-3	2-Butanone (MEK)	50	49.4	99	70-130
104-51-8	n-Butylbenzene	50	43.9	88	70-130
135-98-8	sec-Butylbenzene	50	43.9	88	70-130
98-06-6	tert-Butylbenzene	50	43.7	87	70-130
75-15-0	Carbon disulfide	50	45.3	91	70-130
56-23-5	Carbon tetrachloride	50	50.6	101	70-130
108-90-7	Chlorobenzene	50	42.2	84	70-130
75-00-3	Chloroethane	50	44.5	89	70-130
67-66-3	Chloroform	50	46.1	92	70-130
74-87-3	Chloromethane	50	45.4	91	70-130
95-49-8	o-Chlorotoluene	50	42.6	85	70-130
106-43-4	p-Chlorotoluene	50	45.1	90	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	57.2	114	70-130
124-48-1	Dibromochloromethane	50	47.3	95	70-130
106-93-4	1,2-Dibromoethane	50	45.2	90	70-130
95-50-1	1,2-Dichlorobenzene	50	44.9	90	70-130
541-73-1	1,3-Dichlorobenzene	50	46.0	92	70-130
106-46-7	1,4-Dichlorobenzene	50	43.4	87	70-130
75-71-8	Dichlorodifluoromethane	50	51.2	102	70-130
75-34-3	1,1-Dichloroethane	50	51.7	103	70-130
107-06-2	1,2-Dichloroethane	50	50.7	101	70-130
75-35-4	1,1-Dichloroethene	50	40.8	82	70-130
156-59-2	cis-1,2-Dichloroethene	50	46.6	93	70-130
156-60-5	trans-1,2-Dichloroethene	50	43.2	86	70-130
78-87-5	1,2-Dichloropropane	50	51.6	103	70-130
142-28-9	1,3-Dichloropropane	50	47.8	96	70-130
594-20-7	2,2-Dichloropropane	50	49.3	99	70-130
563-58-6	1,1-Dichloropropene	50	43.2	86	70-130
10061-01-5	cis-1,3-Dichloropropene	50	51.8	104	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-BS	L54318.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	58.6	117	70-130
100-41-4	Ethylbenzene	50	40.5	81	70-130
76-13-1	Freon 113	50	47.1	94	70-130
87-68-3	Hexachlorobutadiene	50	46.2	92	70-130
591-78-6	2-Hexanone	50	46.1	92	70-130
98-82-8	Isopropylbenzene	50	47.3	95	70-130
99-87-6	p-Isopropyltoluene	50	45.5	91	70-130
1634-04-4	Methyl Tert Butyl Ether	50	52.4	105	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	51.0	102	70-130
74-95-3	Methylene bromide	50	52.0	104	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	43.0	86	70-130
103-65-1	n-Propylbenzene	50	43.5	87	70-130
100-42-5	Styrene	50	42.2	84	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	49.4	99	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-130
127-18-4	Tetrachloroethene	50	42.3	85	70-130
109-99-9	Tetrahydrofuran	50	53.4	107	70-130
108-88-3	Toluene	50	45.5	91	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	91.1	182* [b]	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.3	91	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.3	93	70-130
71-55-6	1,1,1-Trichloroethane	50	47.6	95	70-130
79-00-5	1,1,2-Trichloroethane	50	51.5	103	70-130
79-01-6	Trichloroethene	50	47.7	95	70-130
75-69-4	Trichlorofluoromethane	50	39.7	79	70-130
96-18-4	1,2,3-Trichloropropane	50	63.7	127	70-130
95-63-6	1,2,4-Trimethylbenzene	50	43.6	87	70-130
108-67-8	1,3,5-Trimethylbenzene	50	43.6	87	70-130
75-01-4	Vinyl chloride	50	47.1	94	70-130
	m,p-Xylene	100	79.9	80	70-130
95-47-6	o-Xylene	50	42.1	84	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1806-BS	L54318.D	1	06/26/11	AMY	n/a	n/a	MSL1806

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-11, MC1274-12, MC1274-16, MC1274-18, MC1274-21

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-BS	L54378.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	50.3	101	70-130
107-13-1	Acrylonitrile	50	42.4	85	70-130
71-43-2	Benzene	50	48.7	97	70-130
108-86-1	Bromobenzene	50	43.4	87	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	53.8	108	70-130
74-83-9	Bromomethane	50	28.9	58* [a]	70-130
78-93-3	2-Butanone (MEK)	50	48.3	97	70-130
104-51-8	n-Butylbenzene	50	42.3	85	70-130
135-98-8	sec-Butylbenzene	50	42.3	85	70-130
98-06-6	tert-Butylbenzene	50	42.8	86	70-130
75-15-0	Carbon disulfide	50	45.1	90	70-130
56-23-5	Carbon tetrachloride	50	51.8	104	70-130
108-90-7	Chlorobenzene	50	42.0	84	70-130
75-00-3	Chloroethane	50	54.4	109	70-130
67-66-3	Chloroform	50	47.4	95	70-130
74-87-3	Chloromethane	50	46.4	93	70-130
95-49-8	o-Chlorotoluene	50	42.4	85	70-130
106-43-4	p-Chlorotoluene	50	44.6	89	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	52.9	106	70-130
124-48-1	Dibromochloromethane	50	47.5	95	70-130
106-93-4	1,2-Dibromoethane	50	43.7	87	70-130
95-50-1	1,2-Dichlorobenzene	50	43.8	88	70-130
541-73-1	1,3-Dichlorobenzene	50	44.1	88	70-130
106-46-7	1,4-Dichlorobenzene	50	42.0	84	70-130
75-71-8	Dichlorodifluoromethane	50	53.4	107	70-130
75-34-3	1,1-Dichloroethane	50	51.5	103	70-130
107-06-2	1,2-Dichloroethane	50	49.8	100	70-130
75-35-4	1,1-Dichloroethene	50	41.9	84	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.6	95	70-130
156-60-5	trans-1,2-Dichloroethene	50	42.8	86	70-130
78-87-5	1,2-Dichloropropane	50	51.5	103	70-130
142-28-9	1,3-Dichloropropane	50	47.3	95	70-130
594-20-7	2,2-Dichloropropane	50	41.8	84	70-130
563-58-6	1,1-Dichloropropene	50	43.3	87	70-130
10061-01-5	cis-1,3-Dichloropropene	50	50.1	100	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-BS	L54378.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	57.2	114	70-130
100-41-4	Ethylbenzene	50	40.8	82	70-130
76-13-1	Freon 113	50	49.0	98	70-130
87-68-3	Hexachlorobutadiene	50	43.5	87	70-130
591-78-6	2-Hexanone	50	40.4	81	70-130
98-82-8	Isopropylbenzene	50	46.0	92	70-130
99-87-6	p-Isopropyltoluene	50	43.8	88	70-130
1634-04-4	Methyl Tert Butyl Ether	50	50.9	102	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.6	93	70-130
74-95-3	Methylene bromide	50	50.7	101	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	38.0	76	70-130
103-65-1	n-Propylbenzene	50	42.5	85	70-130
100-42-5	Styrene	50	41.8	84	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	48.4	97	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	47.9	96	70-130
127-18-4	Tetrachloroethene	50	41.0	82	70-130
109-99-9	Tetrahydrofuran	50	50.4	101	70-130
108-88-3	Toluene	50	45.8	92	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	80.6	161* [b]	70-130
87-61-6	1,2,3-Trichlorobenzene	50	41.8	84	70-130
120-82-1	1,2,4-Trichlorobenzene	50	44.2	88	70-130
71-55-6	1,1,1-Trichloroethane	50	46.9	94	70-130
79-00-5	1,1,2-Trichloroethane	50	51.1	102	70-130
79-01-6	Trichloroethene	50	47.4	95	70-130
75-69-4	Trichlorofluoromethane	50	41.2	82	70-130
96-18-4	1,2,3-Trichloropropane	50	58.8	118	70-130
95-63-6	1,2,4-Trimethylbenzene	50	42.5	85	70-130
108-67-8	1,3,5-Trimethylbenzene	50	42.2	84	70-130
75-01-4	Vinyl chloride	50	47.9	96	70-130
	m,p-Xylene	100	81.1	81	70-130
95-47-6	o-Xylene	50	41.8	84	70-130

Blank Spike Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL1808-BS	L54378.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	94%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1274-7MS	L54389.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7MSD	L54390.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7	L54381.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	MC1274-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	241	96	230	92	5	70-130/30
107-13-1	Acrylonitrile	ND		250	191	76	193	77	1	70-130/30
71-43-2	Benzene	ND		250	248	99	236	94	5	70-130/30
108-86-1	Bromobenzene	ND		250	220	88	217	87	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	283	113	275	110	3	70-130/30
75-25-2	Bromoform	ND		250	273	109	266	106	3	70-130/30
74-83-9	Bromomethane	ND		250	131	52* [a]	138	55* [a]	5	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	233	93	222	89	5	70-130/30
104-51-8	n-Butylbenzene	ND		250	216	86	212	85	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	217	87	210	84	3	70-130/30
98-06-6	tert-Butylbenzene	ND		250	221	88	215	86	3	70-130/30
75-15-0	Carbon disulfide	ND		250	233	93	220	88	6	70-130/30
56-23-5	Carbon tetrachloride	ND		250	273	109	263	105	4	70-130/30
108-90-7	Chlorobenzene	ND		250	215	86	205	82	5	70-130/30
75-00-3	Chloroethane	ND		250	253	101	221	88	14	70-130/30
67-66-3	Chloroform	ND		250	244	98	231	92	5	70-130/30
74-87-3	Chloromethane	ND		250	227	91	215	86	5	70-130/30
95-49-8	o-Chlorotoluene	ND		250	214	86	207	83	3	70-130/30
106-43-4	p-Chlorotoluene	ND		250	225	90	218	87	3	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	261	104	262	105	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	241	96	235	94	3	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	221	88	215	86	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	220	88	215	86	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	224	90	219	88	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	210	84	207	83	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	288	115	268	107	7	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	261	104	248	99	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	255	102	251	100	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	219	88	207	83	6	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	242	97	226	90	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	224	90	214	86	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	261	104	249	100	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	236	94	230	92	3	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	245	98	238	95	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	227	91	217	87	5	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	256	102	248	99	3	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1274-7MS	L54389.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7MSD	L54390.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7	L54381.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Compound	MC1274-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	287	115	286	114	0	70-130/30
100-41-4	Ethylbenzene	ND		250	211	84	200	80	5	70-130/30
76-13-1	Freon 113	ND		250	254	102	241	96	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	231	92	229	92	1	70-130/30
591-78-6	2-Hexanone	ND		250	204	82	197	79	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	238	95	230	92	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	226	90	218	87	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	257	103	247	99	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	236	94	233	93	1	70-130/30
74-95-3	Methylene bromide	ND		250	257	103	251	100	2	70-130/30
75-09-2	Methylene chloride	ND		250	218	87	204	82	7	70-130/30
91-20-3	Naphthalene	ND		250	188	75	194	78	3	70-130/30
103-65-1	n-Propylbenzene	ND		250	216	86	207	83	4	70-130/30
100-42-5	Styrene	ND		250	216	86	204	82	6	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	253	101	242	97	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	231	92	232	93	0	70-130/30
127-18-4	Tetrachloroethene	ND		250	219	88	204	82	7	70-130/30
109-99-9	Tetrahydrofuran	ND		250	246	98	243	97	1	70-130/30
108-88-3	Toluene	ND		250	237	95	225	90	5	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	432	173* b	427	171* b	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	211	84	219	88	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	223	89	227	91	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	254	102	240	96	6	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	258	103	245	98	5	70-130/30
79-01-6	Trichloroethene	ND		250	264	106	246	98	7	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	224	90	211	84	6	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	282	113	287	115	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	222	89	212	85	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	216	86	210	84	3	70-130/30
75-01-4	Vinyl chloride	ND		250	250	100	236	94	6	70-130/30
	m,p-Xylene	ND		500	417	83	392	78	6	70-130/30
95-47-6	o-Xylene	ND		250	218	87	205	82	6	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC1274-7MS	L54389.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7MSD	L54390.D	5	06/27/11	AMY	n/a	n/a	MSL1808
MC1274-7	L54381.D	1	06/27/11	AMY	n/a	n/a	MSL1808

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC1274-3, MC1274-7, MC1274-12, MC1274-14, MC1274-16, MC1274-18

CAS No.	Surrogate Recoveries	MS	MSD	MC1274-7	Limits
1868-53-7	Dibromofluoromethane	89%	89%	101%	70-130%
2037-26-5	Toluene-D8	91%	92%	103%	70-130%
460-00-4	4-Bromofluorobenzene	88%	90%	95%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits. Associated samples are non-detect for this compound.

Volatile Internal Standard Area Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Check Std: MSL1805-CC1764 **Injection Date:** 06/25/11
Lab File ID: L54288.D **Injection Time:** 16:29
Instrument ID: GCMSL **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	72650	8.19	104551	9.02	60363	12.26	57017	14.82	22181	5.84
Upper Limit [a]	145300	8.69	209102	9.52	120726	12.76	114034	15.32	44362	6.34
Lower Limit [b]	36325	7.69	52276	8.52	30182	11.76	28509	14.32	11091	5.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1805-BS	73018	8.19	106217	9.02	61220	12.26	58253	14.82	25015	5.84
MSL1805-MB	70158	8.20	98410	9.03	55695	12.26	52766	14.82	23941	5.86
ZZZZZZ	69955	8.20	99440	9.03	56398	12.27	51887	14.82	20997	5.88
ZZZZZZ	69634	8.20	98497	9.03	56395	12.26	52127	14.82	26500	5.86
ZZZZZZ	67194	8.20	95792	9.03	54087	12.27	49826	14.82	21285	5.86
ZZZZZZ	67921	8.20	95721	9.03	54496	12.26	50418	14.82	24277	5.85
ZZZZZZ	65510	8.20	93813	9.03	53219	12.26	49044	14.82	20803	5.86
ZZZZZZ	65782	8.20	93166	9.03	53435	12.26	48876	14.82	23050	5.86
ZZZZZZ	65576	8.20	92419	9.03	52354	12.27	47732	14.82	19042	5.87
ZZZZZZ	64269	8.20	92163	9.03	52841	12.26	47861	14.82	20725	5.86
ZZZZZZ	65085	8.20	93468	9.03	53607	12.27	48941	14.82	21964	5.86
ZZZZZZ	64285	8.20	92022	9.03	52530	12.26	48737	14.82	21587	5.86
MC1402-10	65225	8.20	91993	9.03	53465	12.27	47288	14.82	21687	5.86
ZZZZZZ	63484	8.20	91286	9.03	52183	12.26	48046	14.82	22091	5.86
ZZZZZZ	64602	8.20	92881	9.03	53020	12.27	49308	14.82	22256	5.86
ZZZZZZ	62804	8.20	91044	9.03	52374	12.27	48233	14.82	22092	5.86
MC1274-1	62587	8.20	89005	9.03	50971	12.27	46981	14.82	22896	5.87
MC1274-3	63740	8.19	90020	9.03	52149	12.26	46835	14.82	23194	5.86
MC1274-5	65171	8.20	88395	9.03	52204	12.27	46632	14.82	22460	5.86
MC1274-9	62556	8.20	89053	9.03	51130	12.26	46582	14.82	23761	5.86
MC1402-10MS	66381	8.19	98513	9.02	59242	12.26	54069	14.82	24942	5.84
MC1402-10MSD	66204	8.19	97433	9.02	57565	12.26	53603	14.82	25136	5.84

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Check Std:	MSL1806-CC1764	**Injection Date:**	06/26/11
Lab File ID:	L54317.D	**Injection Time:**	09:26
Instrument ID:	GCMSL	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	67622	8.19	98164	9.03	57726	12.26	52965	14.82	26418	5.84
Upper Limit [a]	135244	8.69	196328	9.53	115452	12.76	105930	15.32	52836	6.34
Lower Limit [b]	33811	7.69	49082	8.53	28863	11.76	26483	14.32	13209	5.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1806-BS	67933	8.19	98744	9.02	58124	12.26	52748	14.82	24487	5.84
MSL1806-MB	66005	8.20	94192	9.03	53839	12.26	49764	14.82	24820	5.86
ZZZZZZ	66012	8.20	94174	9.03	53365	12.26	49197	14.82	24961	5.86
ZZZZZZ	65712	8.20	93513	9.03	53361	12.27	48098	14.82	24525	5.86
MC1295-3	64724	8.20	95484	9.03	52598	12.26	48778	14.82	22846	5.85
MC1274-11	64952	8.20	93338	9.03	53546	12.27	48611	14.82	21391	5.86
ZZZZZZ	64250	8.20	91760	9.03	52423	12.27	47630	14.82	20664	5.86
ZZZZZZ	63802	8.20	90625	9.03	52030	12.27	46792	14.82	20141	5.87
ZZZZZZ	62602	8.20	88669	9.03	52347	12.27	46855	14.82	20163	5.86
ZZZZZZ	62958	8.20	88660	9.03	51283	12.27	45994	14.82	21030	5.87
ZZZZZZ	62910	8.20	90722	9.03	52180	12.27	46829	14.82	23217	5.86
ZZZZZZ	60379	8.20	86318	9.03	50084	12.27	45249	14.82	21976	5.86
ZZZZZZ	60841	8.20	87090	9.03	50871	12.27	45444	14.82	21983	5.86
ZZZZZZ	61933	8.20	89763	9.03	51342	12.27	45526	14.82	22593	5.86
ZZZZZZ	63607	8.20	94277	9.03	52092	12.27	48762	14.82	22736	5.85
ZZZZZZ	59690	8.20	86441	9.03	49190	12.27	45267	14.82	22737	5.86
MC1274-12	62784	8.19	89894	9.03	50648	12.27	45894	14.82	22152	5.87
MC1274-16	62186	8.19	88839	9.03	50892	12.27	45884	14.82	22885	5.86
MC1274-18	61992	8.19	88971	9.03	49825	12.26	46418	14.82	20051	5.87
MC1274-21	61272	8.20	86194	9.03	49975	12.27	43838	14.82	19681	5.87
MC1295-3MS	60649	8.19	92038	9.02	54719	12.26	49020	14.82	21975	5.84
MC1295-3MSD	65095	8.19	97530	9.02	57698	12.26	52399	14.82	22718	5.84

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Check Std:	MSL1808-CC1764	**Injection Date:**	06/27/11
Lab File ID:	L54377.D	**Injection Time:**	14:43
Instrument ID:	GCMSL	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	65259	8.19	95792	9.02	55275	12.26	51274	14.82	21063	5.84
Upper Limit [a]	130518	8.69	191584	9.52	110550	12.76	102548	15.32	42126	6.34
Lower Limit [b]	32630	7.69	47896	8.52	27638	11.76	25637	14.32	10532	5.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL1808-BS	64485	8.19	94835	9.03	55882	12.26	50891	14.82	20205	5.85
MSL1808-MB	60497	8.20	86205	9.03	48986	12.27	45056	14.82	20574	5.87
MC1274-7	59050	8.20	84014	9.03	49094	12.27	43715	14.82	20013	5.87
MC1274-14	63194	8.20	90330	9.03	51572	12.27	45782	14.82	19778	5.87
ZZZZZZ	62509	8.20	89329	9.03	55252	12.26	54478	14.82	18984	5.85
MC1274-3 [c]	73292	8.20	105149	9.03	63167	12.27	61925	14.82	23512	5.86
MC1274-12	85325	8.20	119650	9.03	67662	12.27	64855	14.82	28008	5.86
MC1274-16	65428	8.20	89764	9.03	51031	12.27	48578	14.82	22510	5.86
MC1274-18	59287	8.20	80532	9.03	46431	12.27	44018	14.82	20369	5.86
ZZZZZZ	65216	8.20	88539	9.03	51207	12.26	50876	14.82	22272	5.85
MC1274-7MS	62642	8.19	91460	9.02	53889	12.26	50789	14.82	19791	5.84
MC1274-7MSD	64294	8.19	92741	9.02	55253	12.26	50894	14.82	19725	5.84
ZZZZZZ	64105	8.20	90649	9.03	52064	12.26	48074	14.82	21023	5.86
ZZZZZZ	65520	8.20	91122	9.03	53029	12.26	51285	14.82	19904	5.86
ZZZZZZ	62700	8.20	88394	9.03	51659	12.27	47308	14.82	21372	5.86
ZZZZZZ	65945	8.20	92898	9.03	52861	12.26	49035	14.82	20880	5.87
ZZZZZZ	61792	8.20	89160	9.03	51449	12.26	46755	14.82	20826	5.86
ZZZZZZ	62817	8.20	89631	9.03	52221	12.27	47723	14.82	21325	5.86
ZZZZZZ	62079	8.20	89305	9.03	51265	12.27	47784	14.82	19600	5.86
ZZZZZZ	61238	8.20	87624	9.03	51325	12.27	45793	14.82	22218	5.86
ZZZZZZ	60157	8.20	85874	9.03	49625	12.27	45739	14.82	20187	5.87
ZZZZZZ	64915	8.19	95878	9.03	54888	12.26	52781	14.82	20675	5.85

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

Volatile Surrogate Recovery Summary

Job Number: MC1274
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC1274-1	L54306.D	96.0	96.0	89.0
MC1274-3	L54384.D	93.0	105.0	97.0
MC1274-3	L54307.D	93.0	95.0	89.0
MC1274-5	L54308.D	94.0	99.0	88.0
MC1274-7	L54381.D	101.0	103.0	95.0
MC1274-9	L54310.D	96.0	98.0	89.0
MC1274-11	L54324.D	97.0	96.0	88.0
MC1274-12	L54385.D	86.0	93.0	87.0
MC1274-12	L54335.D	95.0	93.0	91.0
MC1274-14	L54382.D	95.0	95.0	90.0
MC1274-16	L54386.D	96.0	105.0	97.0
MC1274-16	L54337.D	100.0	98.0	92.0
MC1274-18	L54387.D	88.0	94.0	89.0
MC1274-18	L54338.D	97.0	97.0	92.0
MC1274-21	L54339.D	98.0	97.0	90.0
MC1274-7MS	L54389.D	89.0	91.0	88.0
MC1274-7MSD	L54390.D	89.0	92.0	90.0
MSL1805-BS	L54289.D	83.0	86.0	83.0
MSL1805-MB	L54291.D	88.0	94.0	88.0
MSL1806-BS	L54318.D	91.0	94.0	92.0
MSL1806-MB	L54320.D	94.0	95.0	88.0
MSL1808-BS	L54378.D	96.0	94.0	92.0
MSL1808-MB	L54380.D	93.0	95.0	89.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC1274
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN35247	0.010	0.0	mg/l	.1	0.10	100.0	85-115%

Associated Samples:
Batch GN35247: MC1274-10, MC1274-13, MC1274-15, MC1274-17, MC1274-19, MC1274-2, MC1274-20, MC1274-4, MC1274-6, MC1274-8
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC1274
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chromium, Hexavalent	GN35247	mg/l	.1	0.10	0.0	20%

Associated Samples:
Batch GN35247: MC1274-10, MC1274-13, MC1274-15, MC1274-17, MC1274-19, MC1274-2, MC1274-20, MC1274-4, MC1274-6, MC1274-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC1274
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN35247	MC1274-10	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GN35247: MC1274-10, MC1274-13, MC1274-15, MC1274-17, MC1274-19, MC1274-2, MC1274-20, MC1274-4, MC1274-6, MC1274-8
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC1274
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Northwest GW/SW Study

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN35247	MC1274-10	mg/l	0.0	.1	0.10	100.0	85-115%

Associated Samples:
Batch GN35247: MC1274-10, MC1274-13, MC1274-15, MC1274-17, MC1274-19, MC1274-2, MC1274-20, MC1274-4, MC1274-6, MC1274-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

New England ACCUTEST LABORATORIES

10/28/11

Technical Report for

Loureiro Eng. Associates

PWCTEH:Willow Brook - Pond W. East Hartford

88UT059.0001

Accutest Job Number: MC4052

Sampling Date: 09/28/11

Report to:

Loureiro Eng. Associates

hmgrimm@loureiro.com

ATTN: Heather Grimm

Total number of pages in report: **127**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

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Accutest Laboratories

Sample Summary

Loureiro Eng. Associates

Job No: MC4052

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC4052-1	09/28/11	10:36	AC	09/28/11	AQ	Ground Water	1241019
MC4052-2	09/28/11	10:36	AC	09/28/11	AQ	Ground Water	1241019UF
MC4052-3	09/28/11	12:20	AC	09/28/11	AQ	Ground Water	1241020
MC4052-4	09/28/11	12:20	AC	09/28/11	AQ	Ground Water	1241020UF
MC4052-5	09/28/11	13:46	AC	09/28/11	AQ	Ground Water	1241021
MC4052-6	09/28/11	13:46	AC	09/28/11	AQ	Ground Water	1241021UF
MC4052-7	09/28/11	14:40	AC	09/28/11	AQ	Ground Water	1241029
MC4052-8	09/28/11	14:40	AC	09/28/11	AQ	Ground Water	1241029UF
MC4052-9	09/28/11	09:30	AC	09/28/11	AQ	Ground Water	1241028
MC4052-10	09/28/11	10:15	AC	09/28/11	AQ	Ground Water	1241015
MC4052-11	09/28/11	10:15	AC	09/28/11	AQ	Ground Water	1241015UF
MC4052-12	09/28/11	12:45	AC	09/28/11	AQ	Ground Water	1241016
MC4052-13	09/28/11	12:45	AC	09/28/11	AQ	Ground Water	1241016UF

Accutest Laboratories

Sample Summary
(continued)

Loureiro Eng. Associates

Job No: MC4052

PWCTEH: Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC4052-14	09/28/11	15:20	AC	09/28/11	AQ	Ground Water	1241017
MC4052-15	09/28/11	15:20	AC	09/28/11	AQ	Ground Water	1241017UF
MC4052-16	09/28/11	12:45	AC	09/28/11	AQ	Ground Water	1241030
MC4052-17	09/28/11	12:45	AC	09/28/11	AQ	Ground Water	1241030UF

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Loureiro Eng. Associates	**Job No**	MC4052
Site:	PWCTEH:Willow Brook - Pond W. East Hartford	**Report Date**	10/17/2011 5:47:25 PM

17 Sample(s) were collected on 09/28/2011 and were received at Accutest on 09/28/2011 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of MC4052. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSG4490

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC4052-16MS, MC4052-16MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 2-Butanone (MEK), 2-Hexanone, Acetone, Naphthalene, Trans-1,4-Dichloro-2-Butene, Trichloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone, Trans-1,4-Dichloro-2-Butene, Trichloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSG4490-CC4471 for dichlorodifluoromethane exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration verification standard MSG4471-ICV4471 for acetone, 2-butanone, 2-hexanone exceeds 35% Difference.

Matrix AQ **Batch ID:** MSG4491

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC4052-14MS, MC4052-14MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MS/MSD Recovery(s) for cis-1,2-Dichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix AQ **Batch ID:** MSG4495

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard MSG4495-CC4471 for dichlorodifluoromethane exceed 30% Difference. This check standard met RCP criteria.

Extractables by GC By Method CT-ETPH 7/06

Matrix AQ **Batch ID:** OP26492

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082

Matrix	AQ	Batch ID:	OP26493

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP17817

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4052-4MS, MC4052-4MSD, MC4052-4SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Chromium, Copper are outside control limits for sample MP17817-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only metals requested.

Metals By Method SW846 7470A

Matrix	AQ	Batch ID:	MP17838

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix	AQ	Batch ID:	MP17877

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix	AQ	Batch ID:	MP17886

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4052-8MS, MC4052-8MSD were used as the QC samples for metals.

Wet Chemistry By Method SW846 7196A

Matrix	AQ	Batch ID:	GN36322

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4052-7DUP, MC4052-7MS were used as the QC samples for Chromium, Hexavalent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC4052).

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1241019		
Lab Sample ID:	MC4052-1	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111401.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241019		
Lab Sample ID:	MC4052-1	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241019		
Lab Sample ID:	MC4052-1	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	116%		70-130%
460-00-4	4-Bromofluorobenzene	110%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241019		
Lab Sample ID:	MC4052-1	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54918.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241019		
Lab Sample ID:	MC4052-1	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ68409.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	113%		30-150%
877-09-8	Tetrachloro-m-xylene	104%		30-150%
2051-24-3	Decachlorobiphenyl	74%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241019UF		
Lab Sample ID:	MC4052-2	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Barium	73.2	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/01/11	10/03/11	MA	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA13459
(2) Instrument QC Batch: MA13460
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17838

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241020		
Lab Sample ID:	MC4052-3	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111402.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241020		
Lab Sample ID:	MC4052-3	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241020		
Lab Sample ID:	MC4052-3	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	116%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241020		
Lab Sample ID:	MC4052-3	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54920.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.307	0.088	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241020		
Lab Sample ID:	MC4052-3	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ68410.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	111%		30-150%
877-09-8	Tetrachloro-m-xylene	102%		30-150%
2051-24-3	Decachlorobiphenyl	89%		30-150%
2051-24-3	Decachlorobiphenyl	87%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241020UF		
Lab Sample ID:	MC4052-4	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	549	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/06/11	10/06/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13478
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17877

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111540.D	1	10/10/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	4.1	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	21.8	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	10	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	4.3	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	74.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	2.5	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	200	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	1.1	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	301	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	17.5	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54922.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.465	0.085	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ68411.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	113%		30-150%
877-09-8	Tetrachloro-m-xylene	135%		30-150%
2051-24-3	Decachlorobiphenyl	78%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241021		
Lab Sample ID:	MC4052-5	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/29/11 11:08	CF	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241021UF		
Lab Sample ID:	MC4052-6	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	52.3	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	55.1	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/06/11	10/06/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	237	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13478
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17877

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111404.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	117%		70-130%
460-00-4	4-Bromofluorobenzene	109%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54924.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.0975	0.085	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB38803.D	1	10/12/11	CZ	10/05/11	OP26493	GBB2423
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l	
11104-28-2	Aroclor 1221	ND	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.27	ug/l	
53469-21-9	Aroclor 1242	ND	0.27	ug/l	
12672-29-6	Aroclor 1248	ND	0.27	ug/l	
11097-69-1	Aroclor 1254	ND	0.27	ug/l	
11096-82-5	Aroclor 1260	ND	0.27	ug/l	
37324-23-5	Aroclor 1262	ND	0.27	ug/l	
11100-14-4	Aroclor 1268	ND	0.27	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-150%
877-09-8	Tetrachloro-m-xylene	97%		30-150%
2051-24-3	Decachlorobiphenyl	38%		30-150%
2051-24-3	Decachlorobiphenyl	41%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241029		
Lab Sample ID:	MC4052-7	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/29/11 11:08	CF	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241029UF		
Lab Sample ID:	MC4052-8	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13482
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17886

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241028		
Lab Sample ID:	MC4052-9	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111391.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2							

	Purge Volume
Run #1	1.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	25	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	2.5	ug/l	
108-86-1	Bromobenzene	ND	25	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	ug/l	
75-25-2	Bromoform	ND	5.0	ug/l	
74-83-9	Bromomethane	ND	10	ug/l	
78-93-3	2-Butanone (MEK)	ND	25	ug/l	
104-51-8	n-Butylbenzene	ND	25	ug/l	
135-98-8	sec-Butylbenzene	ND	25	ug/l	
98-06-6	tert-Butylbenzene	ND	25	ug/l	
75-15-0	Carbon disulfide	ND	25	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	ug/l	
108-90-7	Chlorobenzene	ND	5.0	ug/l	
75-00-3	Chloroethane	ND	10	ug/l	
67-66-3	Chloroform	ND	5.0	ug/l	
74-87-3	Chloromethane	ND	10	ug/l	
95-49-8	o-Chlorotoluene	ND	25	ug/l	
106-43-4	p-Chlorotoluene	ND	25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	25	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241028		
Lab Sample ID:	MC4052-9	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	25	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	ug/l	
563-58-6	1,1-Dichloropropene	ND	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	ug/l	
100-41-4	Ethylbenzene	ND	5.0	ug/l	
76-13-1	Freon 113	ND	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	25	ug/l	
591-78-6	2-Hexanone	ND	25	ug/l	
98-82-8	Isopropylbenzene	ND	25	ug/l	
99-87-6	p-Isopropyltoluene	ND	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	ug/l	
74-95-3	Methylene bromide	ND	25	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
91-20-3	Naphthalene	ND	25	ug/l	
103-65-1	n-Propylbenzene	ND	25	ug/l	
100-42-5	Styrene	ND	25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	ug/l	
109-99-9	Tetrahydrofuran	ND	50	ug/l	
108-88-3	Toluene	ND	5.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ug/l	
79-01-6	Trichloroethene	ND	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	25	ug/l	
75-01-4	Vinyl chloride	ND	5.0	ug/l	
	m,p-Xylene	ND	5.0	ug/l	
95-47-6	o-Xylene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241028		
Lab Sample ID:	MC4052-9	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	119%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015		
Lab Sample ID:	MC4052-10	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111405.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	4.0	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015		
Lab Sample ID:	MC4052-10	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015		
Lab Sample ID:	MC4052-10	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	116%		70-130%
460-00-4	4-Bromofluorobenzene	111%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015		
Lab Sample ID:	MC4052-10	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54926.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.0867	0.082	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015		
Lab Sample ID:	MC4052-10	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB38804.D	1	10/12/11	CZ	10/05/11	OP26493	GBB2423
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		30-150%
877-09-8	Tetrachloro-m-xylene	100%		30-150%
2051-24-3	Decachlorobiphenyl	66%		30-150%
2051-24-3	Decachlorobiphenyl	72%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241015UF		
Lab Sample ID:	MC4052-11	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	< 50	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13482
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17886

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111406.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2	G111428.D	5	10/07/11	AT	n/a	n/a	MSG4491

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	22.5	2.0	ug/l	
67-66-3	Chloroform	3.2	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	18.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	169	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	89.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.9	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	64.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	25.0	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	84.0	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	1.1	1.0	ug/l	
79-01-6	Trichloroethene	387 [a]	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	22.2	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%	122%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	116%	116%	70-130%
460-00-4	4-Bromofluorobenzene	109%	102%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54928.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.365	0.082	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	99%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB38807.D	1	10/12/11	CZ	10/05/11	OP26493	GBB2423
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		30-150%
877-09-8	Tetrachloro-m-xylene	89%		30-150%
2051-24-3	Decachlorobiphenyl	62%		30-150%
2051-24-3	Decachlorobiphenyl	61%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241016		
Lab Sample ID:	MC4052-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/29/11 11:08	CF	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241016UF		
Lab Sample ID:	MC4052-13	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	7.2	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	362	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13482
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17886

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241017		
Lab Sample ID:	MC4052-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111407.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2	G111429.D	5	10/07/11	AT	n/a	n/a	MSG4491

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.74	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	23.9	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	51.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	16.8	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	542 [a]	5.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	3.5	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241017		
Lab Sample ID:	MC4052-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	286	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	39.7	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	176	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	69.9	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%	118%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241017		
Lab Sample ID:	MC4052-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	119%	116%	70-130%
460-00-4	4-Bromofluorobenzene	100%	104%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241017		
Lab Sample ID:	MC4052-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54930.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.675	0.090	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241017		
Lab Sample ID:	MC4052-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB38808.D	1	10/12/11	CZ	10/05/11	OP26493	GBB2423
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		30-150%
877-09-8	Tetrachloro-m-xylene	87%		30-150%
2051-24-3	Decachlorobiphenyl	72%		30-150%
2051-24-3	Decachlorobiphenyl	74%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241017UF		
Lab Sample ID:	MC4052-15	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	678	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13482
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17886

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111408.D	1	10/07/11	AT	n/a	n/a	MSG4490
Run #2	G111411.D	5	10/07/11	AT	n/a	n/a	MSG4490

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	0.50	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	20.8	2.0	ug/l	
67-66-3	Chloroform	3.4	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	18.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	2.5	1.0	ug/l	
75-35-4	1,1-Dichloroethene	162	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	87.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.7	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	58.5	1.0	ug/l	
109-99-9	Tetrahydrofuran	25.0	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	80.7	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	268 [a]	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	20.0	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%	119%	70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	117%	115%	70-130%
460-00-4	4-Bromofluorobenzene	108%	104%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54932.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.372	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB38809.D	1	10/12/11	CZ	10/05/11	OP26493	GBB2423
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		30-150%
877-09-8	Tetrachloro-m-xylene	103%		30-150%
2051-24-3	Decachlorobiphenyl	78%		30-150%
2051-24-3	Decachlorobiphenyl	92%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241030		
Lab Sample ID:	MC4052-16	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/29/11 11:10	CF	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241030UF		
Lab Sample ID:	MC4052-17	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/28/11
		Percent Solids:	n/a
Project:	PWCTEH:Willow Brook - Pond W. East Hartford		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	7.2	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Barium	354	50	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/30/11	10/01/11	SA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13460
(2) Instrument QC Batch: MA13482
(3) Prep QC Batch: MP17817
(4) Prep QC Batch: MP17886

RL = Reporting Limit

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle

Parameter Certification Exceptions

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 3

FED-EX Tracking #: | Bottle Order Control #: | Accutest Quote #: | Accutest Job #: MC4052

Client / Reporting Information

Company Name: LEA
Street Address: 100 Northwest Drive
City / State / Zip: Plainville CT 06062
Project Contact / E-mail: Joe Tirado jtirado@lanerio.com
Phone # / Fax #: 860-747-0481
Sampler(s) Name(s) / Phone #:

Project Information

Project Name: UTC Pew Willow Brook 201 GW
Street:
City: East Hartford, CT
Project #: 88UT059.001
Client PO#:
Project Manager: Adam Dubrey

Billing Information (If different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample # (MC4052)	Field ID / Point of Collection	MFOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	VOCs by 8260B	CT ETPH	PCBs by 8082	Total Zn, Ni, Cu	Cr6	LAB USE ONLY
-1	1241019		9-28-11	1036		GW	6	2				4					X	X	X			
-2	1241019 wf			1036		GW	1			1										X		
-3	1241020			1220		GW	6	2				4					X	X	X			
-4	1241020 wf			1220		GW	1			1										X		
-5	1241021			1346		GW	7	2				5					X	X	X		X	
-6	1241021 wf			1346		GW	1			1										X		
-7	1241029			1440		GW	7	2				5					X	X	X		X	
-8	1241029 wf			1440		GW	1			1										X		
-9	1241028		9-28-11	0930		GW	1	1									X					

Cor 18B, 6F, 2C3, 14D

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] Std. 6 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format LEA
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Please provide CT RCP Analytical list for VOCs & PCBs

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	9-28-11 1555	1	2	9-28-11 1935	2
3		3	4		4
5		5			

Custody Seal #: [ ] Intact [ ] Not intact | Preserved where applicable: [ ] | On Ice: [x] | Cooler Temp. 1.7, 1.9

4.2 4

MC4052: Chain of Custody
Page 1 of 3

ACCUTEST Laboratories

2/2

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: MC4052
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: LEA
ADDRESS: 100 Northwest Dr
CITY, STATE, ZIP: Plainville CT 06062
SEND REPORT TO: Joe Trzaski
PHONE #: (860) 747-6181

FACILITY INFORMATION

PROJECT NAME: Willow Pond GW Monitoring
LOCATION: East Hartford CT
PROJECT NO.: 88UT059
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES: DW - DRINKING WATER; GW - GROUND WATER; WW - WASTE WATER; SO - SOIL; SL - SLUDGE; OI - OIL; LIQ - OTHER LIQUID; SOL - OTHER SOLID

ACCUTEST SAMPLE # (MC4052)	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs	PCBs	CT-ETPH	RCRA 8 Metals + Cu Ni Zn	Total Cr+6	LAB USE ONLY
-10	1241015	9/28/11	10:15	NE	GW	6	2			4		X	X	X			
-11	1241015 uf		10:15			1			1						X		
-12	1241016		12:45			7	2			5		X	X	X		X	
-13	1241016 uf		12:45			1			1						X		
-14	1241017		15:			6	2			4		X	X	X			
-15	1241017 uf					1			1						X		
-16	1241030		12:45			7	2			5		X	X	X		X	
-17	1241030 uf	9/28/11	12:45	NE	GW	1			1						X		

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS *RUSH*
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

PROVIDE CT RCP Report + RCP List for VOCs + PCBs

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Nathan Simmons	9/28/11 1600	1.	2.	9-28-11 1935	2. B.C
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE 1.2-1.9 °C

4.2 4

MC4052: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC4052 **Client:** LEA **Immediate Client Services Action Required:** No

Date / Time Received: 9/28/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 2 **Airbill #'s:**

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC4052: Chain of Custody
Page 3 of 3

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Accutest New England **Client:** Loureiro Eng. Associates

Project Location: PWCTEH:Willow Brook - Pond W. East Hartford **Project Number:** 88UT059.0001

Sampling Date(s): 9/28/2011

Laboratory Sample ID(s): MC4052-1, MC4052-2, MC4052-3, MC4052-4, MC4052-5, MC4052-6, MC4052-7, MC4052-8, MC4052-9, MC4052-10, MC4052-11, MC4052-12, MC4052-13, MC4052-14, MC4052-15, MC4052-16, MC4052-17

Methods: CT-ETPH 7/06, SW846 6010C, SW846 7196A,7470A, 8082,8260B

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☐ No ☑
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☑ No ☐

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: Lab Director

Printed Name: Reza Tand Date: 10/17/2011
Accutest New England

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4052

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4052-1 1241019	Collected: 28-SEP-11 10:36 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-1	SW846 8260B	07-OCT-11 05:01	AT			V8260RCP
MC4052-1	CT-ETPH 7/06	11-OCT-11 18:32	KD	05-OCT-11	AJ	BCTTPH
MC4052-1	SW846 8082	13-OCT-11 10:29	CZ	05-OCT-11	AJ	P8082RCP
MC4052-2 1241019UF	Collected: 28-SEP-11 10:36 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-2	SW846 6010C	01-OCT-11 13:36	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4052-2	SW846 7470A	03-OCT-11 11:28	MA	01-OCT-11	MA	HG
MC4052-3 1241020	Collected: 28-SEP-11 12:20 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-3	SW846 8260B	07-OCT-11 05:29	AT			V8260RCP
MC4052-3	CT-ETPH 7/06	11-OCT-11 19:11	KD	05-OCT-11	AJ	BCTTPH
MC4052-3	SW846 8082	13-OCT-11 10:46	CZ	05-OCT-11	AJ	P8082RCP
MC4052-4 1241020UF	Collected: 28-SEP-11 12:20 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-4	SW846 6010C	01-OCT-11 12:03	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4052-4	SW846 7470A	06-OCT-11 14:26	MA	06-OCT-11	MA	HG
MC4052-5 1241021	Collected: 28-SEP-11 13:46 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-5	SW846 7196A	29-SEP-11 11:08	CF			XCR
MC4052-5	SW846 8260B	10-OCT-11 00:49	AT			V8260RCP
MC4052-5	CT-ETPH 7/06	11-OCT-11 19:51	KD	05-OCT-11	AJ	BCTTPH
MC4052-5	SW846 8082	13-OCT-11 11:07	CZ	05-OCT-11	AJ	P8082RCP
MC4052-6 1241021UF	Collected: 28-SEP-11 13:46 By: AC		Received: 28-SEP-11 By: SAP			

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4052

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4052-6	SW846 6010C	01-OCT-11 13:41	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4052-6	SW846 7470A	06-OCT-11 14:34	MA	06-OCT-11	MA	HG
MC4052-7 1241029	Collected: 28-SEP-11 14:40 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-7	SW846 7196A	29-SEP-11 11:08	CF			XCR
MC4052-7	SW846 8260B	07-OCT-11 06:25	AT			V8260RCP
MC4052-7	CT-ETPH 7/06	11-OCT-11 20:31	KD	05-OCT-11	AJ	BCTTPH
MC4052-7	SW846 8082	12-OCT-11 16:04	CZ	05-OCT-11	AJ	P8082RCP
MC4052-8 1241029UF	Collected: 28-SEP-11 14:40 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-8	SW846 6010C	01-OCT-11 13:45	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4052-8	SW846 7470A	07-OCT-11 13:19	MA	07-OCT-11	MA	HG
MC4052-9 1241028	Collected: 28-SEP-11 09:30 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-9	SW846 8260B	07-OCT-11 00:21	AT			V8260RCP
MC4052-10 1241015	Collected: 28-SEP-11 10:15 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-10	SW846 8260B	07-OCT-11 06:53	AT			V8260RCP
MC4052-10	CT-ETPH 7/06	11-OCT-11 21:11	KD	05-OCT-11	AJ	BCTTPH
MC4052-10	SW846 8082	12-OCT-11 16:24	CZ	05-OCT-11	AJ	P8082RCP
MC4052-11 1241015UF	Collected: 28-SEP-11 10:15 By: AC		Received: 28-SEP-11 By: SAP			
MC4052-11	SW846 6010C	01-OCT-11 12:52	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4052-11	SW846 7470A	07-OCT-11 13:21	MA	07-OCT-11	MA	HG

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4052

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4052-12 Collected: 28-SEP-11 12:45 By: AC 1241016			Received: 28-SEP-11 By: SAP			
MC4052-12	SW846 7196A	29-SEP-11 11:08	CF			XCR
MC4052-12	SW846 8260B	07-OCT-11 07:21	AT			V8260RCP
MC4052-12	SW846 8260B	07-OCT-11 18:49	AT			V8260RCP
MC4052-12	CT-ETPH 7/06	11-OCT-11 21:50	KD	05-OCT-11	AJ	BCTTPH
MC4052-12	SW846 8082	12-OCT-11 17:21	CZ	05-OCT-11	AJ	P8082RCP
MC4052-13 Collected: 28-SEP-11 12:45 By: AC 1241016UF			Received: 28-SEP-11 By: SAP			
MC4052-13	SW846 6010C	01-OCT-11 12:56	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4052-13	SW846 7470A	07-OCT-11 13:24	MA	07-OCT-11	MA	HG
MC4052-14 Collected: 28-SEP-11 15:20 By: AC 1241017			Received: 28-SEP-11 By: SAP			
MC4052-14	SW846 8260B	07-OCT-11 07:49	AT			V8260RCP
MC4052-14	SW846 8260B	07-OCT-11 19:16	AT			V8260RCP
MC4052-14	CT-ETPH 7/06	11-OCT-11 22:29	KD	05-OCT-11	AJ	BCTTPH
MC4052-14	SW846 8082	12-OCT-11 17:41	CZ	05-OCT-11	AJ	P8082RCP
MC4052-15 Collected: 28-SEP-11 15:20 By: AC 1241017UF			Received: 28-SEP-11 By: SAP			
MC4052-15	SW846 6010C	01-OCT-11 13:01	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4052-15	SW846 7470A	07-OCT-11 13:27	MA	07-OCT-11	MA	HG
MC4052-16 Collected: 28-SEP-11 12:45 By: AC 1241030			Received: 28-SEP-11 By: SAP			
MC4052-16	SW846 7196A	29-SEP-11 11:10	CF			XCR
MC4052-16	SW846 8260B	07-OCT-11 08:18	AT			V8260RCP
MC4052-16	SW846 8260B	07-OCT-11 09:47	AT			V8260RCP
MC4052-16	CT-ETPH 7/06	11-OCT-11 23:09	KD	05-OCT-11	AJ	BCTTPH
MC4052-16	SW846 8082	12-OCT-11 18:00	CZ	05-OCT-11	AJ	P8082RCP

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4052

PWCTEH:Willow Brook - Pond W. East Hartford
Project No: 88UT059.0001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4052-17 Collected: 28-SEP-11 12:45 By: AC Received: 28-SEP-11 By: SAP 1241030UF						
MC4052-17	SW846 6010C	01-OCT-11 14:29	SA	30-SEP-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4052-17	SW846 7470A	07-OCT-11 13:29	MA	07-OCT-11	MA	HG

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-MB	G111390.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-MB	G111390.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-MB	G111390.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	116%	70-130%
460-00-4	4-Bromofluorobenzene	108%	70-130%

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4491-MB	G111415.D	1	10/07/11	AT	n/a	n/a	MSG4491

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-12, MC4052-14

CAS No.	Compound	Result	RL	Units	Q
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	122%	70-130%
2037-26-5	Toluene-D8	117%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

Blank Spike Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-BS	G111389.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	63.5	127	70-130
107-13-1	Acrylonitrile	50	50.7	101	70-130
71-43-2	Benzene	50	54.7	109	70-130
108-86-1	Bromobenzene	50	43.0	86	70-130
75-27-4	Bromodichloromethane	50	56.2	112	70-130
75-25-2	Bromoform	50	41.4	83	70-130
74-83-9	Bromomethane	50	55.0	110	70-130
78-93-3	2-Butanone (MEK)	50	59.5	119	70-130
104-51-8	n-Butylbenzene	50	45.4	91	70-130
135-98-8	sec-Butylbenzene	50	48.2	96	70-130
98-06-6	tert-Butylbenzene	50	46.5	93	70-130
75-15-0	Carbon disulfide	50	59.4	119	70-130
56-23-5	Carbon tetrachloride	50	51.3	103	70-130
108-90-7	Chlorobenzene	50	45.9	92	70-130
75-00-3	Chloroethane	50	57.4	115	70-130
67-66-3	Chloroform	50	56.3	113	70-130
74-87-3	Chloromethane	50	53.2	106	70-130
95-49-8	o-Chlorotoluene	50	44.1	88	70-130
106-43-4	p-Chlorotoluene	50	46.2	92	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	38.4	77	70-130
124-48-1	Dibromochloromethane	50	46.1	92	70-130
106-93-4	1,2-Dibromoethane	50	46.1	92	70-130
95-50-1	1,2-Dichlorobenzene	50	47.5	95	70-130
541-73-1	1,3-Dichlorobenzene	50	46.7	93	70-130
106-46-7	1,4-Dichlorobenzene	50	45.9	92	70-130
75-71-8	Dichlorodifluoromethane	50	48.2	96	70-130
75-34-3	1,1-Dichloroethane	50	57.4	115	70-130
107-06-2	1,2-Dichloroethane	50	54.2	108	70-130
75-35-4	1,1-Dichloroethene	50	56.1	112	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.1	106	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.4	107	70-130
78-87-5	1,2-Dichloropropane	50	53.9	108	70-130
142-28-9	1,3-Dichloropropane	50	46.5	93	70-130
594-20-7	2,2-Dichloropropane	50	50.9	102	70-130
563-58-6	1,1-Dichloropropene	50	54.7	109	70-130
10061-01-5	cis-1,3-Dichloropropene	50	48.9	98	70-130

Blank Spike Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-BS	G111389.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	50.9	102	70-130
100-41-4	Ethylbenzene	50	48.0	96	70-130
76-13-1	Freon 113	50	58.4	117	70-130
87-68-3	Hexachlorobutadiene	50	42.1	84	70-130
591-78-6	2-Hexanone	50	44.7	89	70-130
98-82-8	Isopropylbenzene	50	50.3	101	70-130
99-87-6	p-Isopropyltoluene	50	49.4	99	70-130
1634-04-4	Methyl Tert Butyl Ether	50	52.7	105	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.8	96	70-130
74-95-3	Methylene bromide	50	54.2	108	70-130
75-09-2	Methylene chloride	50	55.1	110	70-130
91-20-3	Naphthalene	50	36.6	73	70-130
103-65-1	n-Propylbenzene	50	46.8	94	70-130
100-42-5	Styrene	50	45.5	91	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	44.4	89	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	38.1	76	70-130
127-18-4	Tetrachloroethene	50	47.1	94	70-130
109-99-9	Tetrahydrofuran	50	47.7	95	70-130
108-88-3	Toluene	50	54.8	110	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	36.4	73	70-130
87-61-6	1,2,3-Trichlorobenzene	50	35.6	71	70-130
120-82-1	1,2,4-Trichlorobenzene	50	38.5	77	70-130
71-55-6	1,1,1-Trichloroethane	50	60.9	122	70-130
79-00-5	1,1,2-Trichloroethane	50	53.3	107	70-130
79-01-6	Trichloroethene	50	57.0	114	70-130
75-69-4	Trichlorofluoromethane	50	50.3	101	70-130
96-18-4	1,2,3-Trichloropropane	50	40.7	81	70-130
95-63-6	1,2,4-Trimethylbenzene	50	47.4	95	70-130
108-67-8	1,3,5-Trimethylbenzene	50	44.9	90	70-130
75-01-4	Vinyl chloride	50	54.9	110	70-130
	m,p-Xylene	100	93.9	94	70-130
95-47-6	o-Xylene	50	47.7	95	70-130

Blank Spike Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4490-BS	G111389.D	1	10/06/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	117%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4491-BS	G111413.D	1	10/07/11	AT	n/a	n/a	MSG4491
MSG4491-BSD	G111414.D	1	10/07/11	AT	n/a	n/a	MSG4491

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-12, MC4052-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	50	53.5	107	54.2	108	1	70-130/25
79-01-6	Trichloroethene	50	51.5	103	52.8	106	2	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	120%	122%	70-130%
2037-26-5	Toluene-D8	116%	116%	70-130%
460-00-4	4-Bromofluorobenzene	88%	87%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	63.1	126	62.5	125	1	70-130/25
107-13-1	Acrylonitrile	50	51.3	103	50.0	100	3	70-130/25
71-43-2	Benzene	50	47.9	96	50.8	102	6	70-130/25
108-86-1	Bromobenzene	50	41.8	84	43.6	87	4	70-130/25
75-27-4	Bromodichloromethane	50	49.2	98	50.6	101	3	70-130/25
75-25-2	Bromoform	50	44.4	89	45.5	91	2	70-130/25
74-83-9	Bromomethane	50	47.0	94	50.0	100	6	70-130/25
78-93-3	2-Butanone (MEK)	50	57.2	114	46.7	93	20	70-130/25
104-51-8	n-Butylbenzene	50	47.2	94	49.8	100	5	70-130/25
135-98-8	sec-Butylbenzene	50	47.6	95	50.8	102	7	70-130/25
98-06-6	tert-Butylbenzene	50	44.6	89	47.8	96	7	70-130/25
75-15-0	Carbon disulfide	50	52.2	104	53.5	107	2	70-130/25
56-23-5	Carbon tetrachloride	50	48.1	96	49.4	99	3	70-130/25
108-90-7	Chlorobenzene	50	45.1	90	47.0	94	4	70-130/25
75-00-3	Chloroethane	50	49.6	99	51.4	103	4	70-130/25
67-66-3	Chloroform	50	50.1	100	52.3	105	4	70-130/25
74-87-3	Chloromethane	50	46.4	93	48.2	96	4	70-130/25
95-49-8	o-Chlorotoluene	50	41.7	83	44.3	89	6	70-130/25
106-43-4	p-Chlorotoluene	50	45.5	91	47.4	95	4	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	45.9	92	44.4	89	3	70-130/25
124-48-1	Dibromochloromethane	50	46.9	94	48.7	97	4	70-130/25
106-93-4	1,2-Dibromoethane	50	46.7	93	49.0	98	5	70-130/25
95-50-1	1,2-Dichlorobenzene	50	46.6	93	50.2	100	7	70-130/25
541-73-1	1,3-Dichlorobenzene	50	45.4	91	48.4	97	6	70-130/25
106-46-7	1,4-Dichlorobenzene	50	45.7	91	48.5	97	6	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.4	79	38.1	76	3	70-130/25
75-34-3	1,1-Dichloroethane	50	50.0	100	51.8	104	4	70-130/25
107-06-2	1,2-Dichloroethane	50	49.2	98	51.5	103	5	70-130/25
75-35-4	1,1-Dichloroethene	50	52.3	105	55.0	110	5	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	46.0	92	47.5	95	3	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	50.9	102	4	70-130/25
78-87-5	1,2-Dichloropropane	50	48.8	98	50.6	101	4	70-130/25
142-28-9	1,3-Dichloropropane	50	45.4	91	47.3	95	4	70-130/25
594-20-7	2,2-Dichloropropane	50	54.7	109	53.1	106	3	70-130/25
563-58-6	1,1-Dichloropropene	50	48.9	98	50.8	102	4	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	45.2	90	47.8	96	6	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	48.1	96	51.2	102	6	70-130/25
100-41-4	Ethylbenzene	50	46.5	93	48.2	96	4	70-130/25
76-13-1	Freon 113	50	52.0	104	53.9	108	4	70-130/25
87-68-3	Hexachlorobutadiene	50	46.9	94	49.4	99	5	70-130/25
591-78-6	2-Hexanone	50	47.6	95	51.3	103	7	70-130/25
98-82-8	Isopropylbenzene	50	49.0	98	51.4	103	5	70-130/25
99-87-6	p-Isopropyltoluene	50	49.0	98	51.3	103	5	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	47.7	95	48.2	96	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.4	95	50.7	101	7	70-130/25
74-95-3	Methylene bromide	50	48.5	97	51.2	102	5	70-130/25
75-09-2	Methylene chloride	50	48.5	97	50.0	100	3	70-130/25
91-20-3	Naphthalene	50	40.4	81	41.8	84	3	70-130/25
103-65-1	n-Propylbenzene	50	45.4	91	47.9	96	5	70-130/25
100-42-5	Styrene	50	45.0	90	47.5	95	5	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	44.7	89	45.2	90	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	43.7	87	44.2	88	1	70-130/25
127-18-4	Tetrachloroethene	50	45.3	91	47.1	94	4	70-130/25
109-99-9	Tetrahydrofuran	50	49.0	98	50.2	100	2	70-130/25
108-88-3	Toluene	50	48.2	96	51.1	102	6	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	40.0	80	42.3	85	6	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	39.6	79	43.1	86	8	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	42.5	85	43.5	87	2	70-130/25
71-55-6	1,1,1-Trichloroethane	50	53.2	106	51.7	103	3	70-130/25
79-00-5	1,1,2-Trichloroethane	50	48.2	96	50.1	100	4	70-130/25
79-01-6	Trichloroethene	50	47.8	96	50.0	100	4	70-130/25
75-69-4	Trichlorofluoromethane	50	47.2	94	49.7	99	5	70-130/25
96-18-4	1,2,3-Trichloropropane	50	42.2	84	44.3	89	5	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	45.3	91	47.9	96	6	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	43.6	87	45.8	92	5	70-130/25
75-01-4	Vinyl chloride	50	44.2	88	46.5	93	5	70-130/25
	m,p-Xylene	100	93.3	93	96.8	97	4	70-130/25
95-47-6	o-Xylene	50	46.9	94	48.8	98	4	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	100%	70-130%
2037-26-5	Toluene-D8	103%	104%	70-130%
460-00-4	4-Bromofluorobenzene	78%	79%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC4052-16MS	G111409.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16MSD	G111410.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111408.D	1	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111411.D	5	10/07/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	MC4052-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	105	42* [a]	115	46* [a]	9	70-130/30
107-13-1	Acrylonitrile	ND		250	255	102	264	106	3	70-130/30
71-43-2	Benzene	0.50		250	260	104	262	105	1	70-130/30
108-86-1	Bromobenzene	ND		250	205	82	206	82	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	252	101	256	102	2	70-130/30
75-25-2	Bromoform	ND		250	205	82	203	81	1	70-130/30
74-83-9	Bromomethane	ND		250	264	106	285	114	8	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	140	56* [a]	172	69* [a]	21	70-130/30
104-51-8	n-Butylbenzene	ND		250	215	86	222	89	3	70-130/30
135-98-8	sec-Butylbenzene	ND		250	232	93	236	94	2	70-130/30
98-06-6	tert-Butylbenzene	ND		250	223	89	219	88	2	70-130/30
75-15-0	Carbon disulfide	ND		250	288	115	304	122	5	70-130/30
56-23-5	Carbon tetrachloride	ND		250	256	102	257	103	0	70-130/30
108-90-7	Chlorobenzene	ND		250	222	89	218	87	2	70-130/30
75-00-3	Chloroethane	20.8		250	295	110	315	118	7	70-130/30
67-66-3	Chloroform	3.4		250	279	110	283	112	1	70-130/30
74-87-3	Chloromethane	ND		250	272	109	273	109	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	208	83	206	82	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	219	88	218	87	0	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	191	76	199	80	4	70-130/30
124-48-1	Dibromochloromethane	ND		250	221	88	222	89	0	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	227	91	227	91	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	226	90	226	90	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	222	89	226	90	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	220	88	226	90	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	217	87	250	100	14	70-130/30
75-34-3	1,1-Dichloroethane	18.8		250	290	108	307	115	6	70-130/30
107-06-2	1,2-Dichloroethane	2.5		250	267	106	265	105	1	70-130/30
75-35-4	1,1-Dichloroethene	162		250	399	95	418	102	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	87.2		250	324	95	344	103	6	70-130/30
156-60-5	trans-1,2-Dichloroethene	1.7		250	261	104	275	109	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	261	104	259	104	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	225	90	220	88	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	231	92	238	95	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	260	104	259	104	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	230	92	231	92	0	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC4052-16MS	G111409.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16MSD	G111410.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111408.D	1	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111411.D	5	10/07/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	MC4052-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	236	94	239	96	1	70-130/30
100-41-4	Ethylbenzene	ND		250	231	92	230	92	0	70-130/30
76-13-1	Freon 113	ND		250	281	112	302	121	7	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	213	85	216	86	1	70-130/30
591-78-6	2-Hexanone	ND		250	136	54* [a]	142	57* [a]	4	70-130/30
98-82-8	Isopropylbenzene	ND		250	241	96	242	97	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	235	94	240	96	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	260	104	270	108	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	222	89	223	89	0	70-130/30
74-95-3	Methylene bromide	ND		250	254	102	249	100	2	70-130/30
75-09-2	Methylene chloride	ND		250	273	109	282	113	3	70-130/30
91-20-3	Naphthalene	ND		250	169	68* [a]	183	73	8	70-130/30
103-65-1	n-Propylbenzene	ND		250	221	88	223	89	1	70-130/30
100-42-5	Styrene	ND		250	219	88	216	86	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	217	87	216	86	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	205	82	209	84	2	70-130/30
127-18-4	Tetrachloroethene	58.5		250	264	82	257	79	3	70-130/30
109-99-9	Tetrahydrofuran	25.0		250	269	98	277	101	3	70-130/30
108-88-3	Toluene	ND		250	263	105	262	105	0	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	157	63* [a]	164	66* [a]	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	166	66* [a]	182	73	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	179	72	188	75	5	70-130/30
71-55-6	1,1,1-Trichloroethane	80.7		250	365	114	382	121	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	256	102	257	103	0	70-130/30
79-01-6	Trichloroethene	268 [b]		250	602	64* [a]	589	59* [a]	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	261	104	262	105	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	190	76	193	77	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	223	89	225	90	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	210	84	213	85	1	70-130/30
75-01-4	Vinyl chloride	20.0		250	277	103	289	108	4	70-130/30
	m,p-Xylene	ND		500	458	92	457	91	0	70-130/30
95-47-6	o-Xylene	ND		250	227	91	229	92	1	70-130/30

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC4052-16MS	G111409.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16MSD	G111410.D	5	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111408.D	1	10/07/11	AT	n/a	n/a	MSG4490
MC4052-16	G111411.D	5	10/07/11	AT	n/a	n/a	MSG4490

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-1, MC4052-3, MC4052-7, MC4052-9, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Surrogate Recoveries	MS	MSD	MC4052-16	MC4052-16	Limits
1868-53-7	Dibromofluoromethane	117%	121%	116%	119%	70-130%
2037-26-5	Toluene-D8	119%	116%	117%	115%	70-130%
460-00-4	4-Bromofluorobenzene	87%	87%	108%	104%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Result is from Run #2.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC4052-14MS	G111430.D	5	10/07/11	AT	n/a	n/a	MSG4491
MC4052-14MSD	G111431.D	5	10/07/11	AT	n/a	n/a	MSG4491
MC4052-14	G111429.D	5	10/07/11	AT	n/a	n/a	MSG4491

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4052-12, MC4052-14

CAS No.	Compound	MC4052-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethene	542		250	552	4* [a]	506	-14* [a]	9	70-130/30
79-01-6	Trichloroethene	166		250	351	74	346	72	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC4052-14	Limits
1868-53-7	Dibromofluoromethane	122%	118%	118%	70-130%
2037-26-5	Toluene-D8	116%	118%	116%	70-130%
460-00-4	4-Bromofluorobenzene	85%	85%	104%	70-130%

(a) Outside control limits due to high level in sample relative to spike amount.

Volatile Internal Standard Area Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSG4490-CC4471	**Injection Date:**	10/06/11
Lab File ID:	G111387.D	**Injection Time:**	22:28
Instrument ID:	GCMSG	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	77146	9.11	125891	9.98	77967	13.27	69741	15.84	32959	6.64
Upper Limit [a]	154292	9.61	251782	10.48	155934	13.77	139482	16.34	65918	7.14
Lower Limit [b]	38573	8.61	62946	9.48	38984	12.77	34871	15.34	16480	6.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG4490-BS	79125	9.11	127161	9.99	77001	13.27	69375	15.84	33924	6.64
MSG4490-MB	77124	9.11	124707	9.99	70781	13.27	47372	15.85	32808	6.65
MC4052-9	75960	9.11	122729	9.99	71334	13.27	47839	15.85	31483	6.64
ZZZZZZ	76273	9.11	124294	9.99	69831	13.27	47013	15.85	38001	6.65
ZZZZZZ	76296	9.11	125606	9.99	70571	13.27	46149	15.85	38424	6.65
ZZZZZZ	74088	9.11	123741	9.99	69881	13.27	51060	15.85	42292	6.65
ZZZZZZ	73109	9.11	122191	9.99	69253	13.27	50138	15.85	37311	6.65
ZZZZZZ	72865	9.11	123214	9.99	70601	13.27	57186	15.84	39651	6.64
ZZZZZZ	73922	9.11	120217	9.99	70730	13.27	55934	15.85	36634	6.64
ZZZZZZ	72925	9.11	121364	9.99	69657	13.27	56867	15.85	37023	6.64
ZZZZZZ	72721	9.11	122698	9.99	69126	13.27	48657	15.85	37942	6.64
ZZZZZZ	72026	9.11	122630	9.99	70071	13.27	48743	15.85	37903	6.65
MC4052-1	73083	9.11	121018	9.99	71101	13.27	45709	15.85	35154	6.64
MC4052-3	72564	9.11	121069	9.99	69000	13.27	45583	15.85	36271	6.64
MC4052-7	71241	9.11	118953	9.99	67390	13.27	44650	15.85	36832	6.65
MC4052-10	70651	9.11	119376	9.99	68135	13.27	43771	15.85	37460	6.65
MC4052-12	71586	9.11	117230	9.99	67267	13.27	44404	15.85	39402	6.64
MC4052-14	56549	9.11	95450	9.99	59158	13.27	44134	15.85	33872	6.66
MC4052-16	70416	9.11	115490	9.99	66962	13.27	44515	15.85	36564	6.64
MC4052-16MS	70825	9.10	116388	9.98	70639	13.27	65290	15.84	29722	6.64
MC4052-16MSD	69033	9.10	118251	9.99	71579	13.27	65676	15.84	32543	6.64
MC4052-16	68876	9.11	114952	9.99	67076	13.27	46949	15.85	32386	6.64

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSG4491-CC4471	**Injection Date:**	10/07/11
Lab File ID:	G111412.D	**Injection Time:**	10:23
Instrument ID:	GCMSG	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	69676	9.11	115249	9.99	71121	13.27	66708	15.84	32021	6.64
Upper Limit [a]	139352	9.61	230498	10.49	142242	13.77	133416	16.34	64042	7.14
Lower Limit [b]	34838	8.61	57625	9.49	35561	12.77	33354	15.34	16011	6.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG4491-BS	70143	9.11	119272	9.98	72148	13.27	66112	15.84	33194	6.64
MSG4491-BSD	69602	9.10	118059	9.99	71060	13.27	67577	15.84	33445	6.64
MSG4491-MB	68833	9.11	116797	9.99	69059	13.27	46323	15.85	33707	6.65
ZZZZZZ	70709	9.11	120525	9.99	68745	13.27	48038	15.85	26405	6.67
ZZZZZZ	68995	9.11	118114	9.99	68635	13.27	47188	15.85	38190	6.65
ZZZZZZ	58980	9.11	101390	9.99	60824	13.27	43521	15.85	36271	6.66
ZZZZZZ	68296	9.11	113836	9.99	66232	13.27	45076	15.85	37666	6.64
ZZZZZZ	68009	9.11	116358	9.99	65912	13.27	45615	15.85	39725	6.64
ZZZZZZ	70331	9.11	114720	9.99	66954	13.27	46748	15.85	38250	6.65
ZZZZZZ	66271	9.11	115199	9.99	65389	13.27	44561	15.85	37830	6.65
ZZZZZZ	69147	9.11	116405	9.99	67252	13.27	45409	15.85	39422	6.65
ZZZZZZ	66417	9.11	112774	9.99	65236	13.27	45447	15.85	39913	6.65
ZZZZZZ	66896	9.11	113242	9.99	67748	13.27	59818	15.84	37747	6.64
ZZZZZZ	68089	9.11	114531	9.99	66358	13.27	57153	15.84	37763	6.65
ZZZZZZ	68076	9.11	114423	9.99	67704	13.27	58334	15.84	34644	6.64
MC4052-12	67004	9.11	114387	9.99	64850	13.27	45975	15.85	37127	6.64
MC4052-14	69318	9.11	115899	9.99	67029	13.27	46511	15.85	36163	6.65
MC4052-14MS	67264	9.11	116267	9.99	69374	13.27	66851	15.84	37382	6.64
MC4052-14MSD	70068	9.11	116985	9.99	71924	13.27	66308	15.84	35013	6.63
ZZZZZZ	69073	9.11	115998	9.99	70569	13.27	64204	15.84	38357	6.65
ZZZZZZ	71805	9.11	118391	9.99	72098	13.27	65634	15.84	39191	6.65
ZZZZZZ	73064	9.11	121989	9.99	70649	13.27	50915	15.85	40401	6.65

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Check Std:	MSG4495-CC4471	**Injection Date:**	10/09/11
Lab File ID:	G111515.D	**Injection Time:**	13:17
Instrument ID:	GCMSG	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	74586	9.11	120162	9.99	67873	13.27	63344	15.85	36682	6.64
Upper Limit [a]	149172	9.61	240324	10.49	135746	13.77	126688	16.35	73364	7.14
Lower Limit [b]	37293	8.61	60081	9.49	33937	12.77	31672	15.35	18341	6.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG4495-BS	78141	9.11	125946	9.99	69482	13.27	65040	15.84	35793	6.65
MSG4495-BSD	80661	9.11	126232	9.99	71124	13.27	65608	15.84	34749	6.64
MSG4495-MB	80430	9.11	125360	9.99	66031	13.27	45884	15.85	40289	6.65
ZZZZZZ	79862	9.11	122015	9.99	64449	13.27	45512	15.85	35730	6.67
ZZZZZZ	78947	9.11	126029	9.99	64939	13.27	44456	15.85	32979	6.65
ZZZZZZ	78578	9.11	124827	9.99	65589	13.27	44322	15.85	29480	6.65
ZZZZZZ	78109	9.11	123460	9.99	67437	13.27	46297	15.85	40010	6.67
ZZZZZZ	77268	9.11	120974	9.99	64051	13.27	43806	15.85	34062	6.65
ZZZZZZ	75299	9.11	121220	9.99	64423	13.27	44105	15.85	36280	6.65
ZZZZZZ	76189	9.11	121207	9.99	64898	13.27	45531	15.85	37786	6.65
ZZZZZZ	76537	9.11	122341	9.99	64624	13.27	43615	15.85	31843	6.65
ZZZZZZ	75777	9.11	120937	9.99	64632	13.27	43372	15.85	35858	6.66
ZZZZZZ	77326	9.11	121965	9.99	64776	13.27	43926	15.85	35286	6.65
ZZZZZZ	76317	9.11	118448	9.99	64415	13.27	43391	15.85	29634	6.64
ZZZZZZ	74052	9.11	117497	9.99	62626	13.27	42042	15.85	32579	6.65
ZZZZZZ	76588	9.11	122131	9.99	64045	13.27	42564	15.85	33367	6.65
ZZZZZZ	74313	9.11	119892	9.99	62852	13.27	41198	15.85	34972	6.65
ZZZZZZ	76069	9.11	120394	9.99	64939	13.27	42911	15.85	33848	6.64
ZZZZZZ	76984	9.11	122686	9.99	64356	13.27	43018	15.85	34117	6.65
ZZZZZZ	74984	9.11	119730	9.99	63645	13.27	43121	15.85	32140	6.64
MC4115-33	76252	9.11	121141	9.99	64444	13.27	41779	15.85	32919	6.64
MC4115-33MS	75803	9.11	123177	9.99	68400	13.27	64194	15.84	32981	6.64
MC4115-33MSD	76144	9.11	121223	9.99	67873	13.27	63629	15.84	33477	6.64
MC4052-5	76968	9.11	121212	9.99	64955	13.27	43989	15.85	35004	6.65

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC4052-1	G111401.D	115.0	116.0	110.0
MC4052-3	G111402.D	115.0	116.0	109.0
MC4052-5	G111540.D	100.0	101.0	95.0
MC4052-7	G111404.D	116.0	117.0	109.0
MC4052-9	G111391.D	115.0	119.0	107.0
MC4052-10	G111405.D	117.0	116.0	111.0
MC4052-12	G111428.D	122.0	116.0	102.0
MC4052-12	G111406.D	117.0	116.0	109.0
MC4052-14	G111429.D	118.0	116.0	104.0
MC4052-14	G111407.D	116.0	119.0	100.0
MC4052-16	G111411.D	119.0	115.0	104.0
MC4052-16	G111408.D	116.0	117.0	108.0
MC4052-14MS	G111430.D	122.0	116.0	85.0
MC4052-14MSD	G111431.D	118.0	118.0	85.0
MC4052-16MS	G111409.D	117.0	119.0	87.0
MC4052-16MSD	G111410.D	121.0	116.0	87.0
MSG4490-BS	G111389.D	112.0	117.0	89.0
MSG4490-MB	G111390.D	112.0	116.0	108.0
MSG4491-BS	G111413.D	120.0	116.0	88.0
MSG4491-BSD	G111414.D	122.0	116.0	87.0
MSG4491-MB	G111415.D	122.0	117.0	106.0
MSG4495-BS	G111516.D	104.0	103.0	78.0
MSG4495-BSD	G111517.D	100.0	104.0	79.0
MSG4495-MB	G111518.D	100.0	102.0	97.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26492-MB	BC54914.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4052-1, MC4052-3, MC4052-5, MC4052-7, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	50-149%

Method Blank Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26493-MB	YZ68407.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4052-1, MC4052-3, MC4052-5, MC4052-7, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	116%	30-150%
877-09-8	Tetrachloro-m-xylene	108%	30-150%
2051-24-3	Decachlorobiphenyl	57%	30-150%
2051-24-3	Decachlorobiphenyl	57%	30-150%

Blank Spike Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26492-BS	BC54916.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4052-1, MC4052-3, MC4052-5, MC4052-7, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.666	95	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	106%	50-149%

Blank Spike Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26493-BS	YZ68408.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4052-1, MC4052-3, MC4052-5, MC4052-7, MC4052-10, MC4052-12, MC4052-14, MC4052-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.9	95	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.7	85	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	96%	30-150%
877-09-8	Tetrachloro-m-xylene	89%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%

Semivolatile Surrogate Recovery Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: CT-ETPH 7/06 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC4052-1	BC54918.D	95.0
MC4052-3	BC54920.D	101.0
MC4052-5	BC54922.D	89.0
MC4052-7	BC54924.D	95.0
MC4052-10	BC54926.D	95.0
MC4052-12	BC54928.D	99.0
MC4052-14	BC54930.D	82.0
MC4052-16	BC54932.D	100.0
OP26492-BS	BC54916.D	106.0
OP26492-MB	BC54914.D	83.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	50-149%

(a) Recovery from GC signal #1

Semivolatile Surrogate Recovery Summary

Job Number: MC4052
Account: LEA Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Method: SW846 8082 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
MC4052-1	YZ68409.D	113.0	104.0	74.0	75.0
MC4052-3	YZ68410.D	111.0	102.0	89.0	87.0
MC4052-5	YZ68411.D	113.0	135.0	78.0	75.0
MC4052-7	BB38803.D	90.0	97.0	38.0	41.0
MC4052-10	BB38804.D	93.0	100.0	66.0	72.0
MC4052-12	BB38807.D	83.0	89.0	62.0	61.0
MC4052-14	BB38808.D	87.0	87.0	72.0	74.0
MC4052-16	BB38809.D	91.0	103.0	78.0	92.0
OP26493-BS	YZ68408.D	96.0	89.0	44.0	44.0
OP26493-MB	YZ68407.D	116.0	108.0	57.0	57.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				09/30/11		09/30/11	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	24	40				
Antimony	6.0	1.2	2				
Arsenic	4.0	.83	1.1	-0.30	<4.0	-0.70	<4.0
Barium	50	1	1	1.9	<50	1.4	<50
Beryllium	4.0	.24	.24				
Boron	100	.51	1.8				
Cadmium	4.0	.18	.18	0.10	<4.0	0.10	<4.0
Calcium	5000	26	26				
Chromium	10	.66	.66	0.10	<10	0.30	<10
Cobalt	50	.16	.22				
Copper	25	1.3	2.5	0.20	<25	1.4	<25
Gold	50	2.2	2.9				
Iron	100	14	14				
Lead	5.0	1.2	1.4	0.20	<5.0	-0.70	<5.0
Lithium	5000	32	33				
Magnesium	5000	71	110				
Manganese	15	.15	.43				
Molybdenum	100	.22	.36				
Nickel	40	.22	.35	-0.10	<40	-0.10	<40
Palladium	50	2.4	3.4				
Platinum	50	6.2	15				
Potassium	5000	86	86				
Selenium	10	2.1	2.1	0.40	<10	1.9	<10
Silicon	100	2.2	18				
Silver	5.0	.76	1	-0.40	<5.0	0.0	<5.0
Sodium	5000	21	41				
Strontium	10	.3	.38				
Thallium	5.0	.83	.88				
Tin	100	.45	.47				
Titanium	50	.61	1				
Tungsten	100	7.7	13				
Vanadium	10	1.2	1.5				
Zinc	20	.12	.61	0.90	<20	1.8	<20

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Associated samples MP17817: MC4052-2, MC4052-4, MC4052-6, MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/30/11

Metal	MC4052-4 Original	MS	Spikelot MPICP3	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	1.2	545	500	108.8	75-125
Barium	549	2610	2000	103.1	75-125
Beryllium	anr				
Boron	anr				
Cadmium	0.0	556	500	111.2	75-125
Calcium					
Chromium	1.1	498	500	99.4	75-125
Cobalt					
Copper	1.8	532	500	106.0	75-125
Gold					
Iron					
Lead	0.0	955	1000	95.5	75-125
Lithium	anr				
Magnesium					
Manganese					
Molybdenum					
Nickel	3.7	486	500	96.5	75-125
Palladium					
Platinum					
Potassium					
Selenium	0.0	535	500	107.0	75-125
Silicon					
Silver	0.0	230	200	115.0	75-125
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium	anr				
Zinc	16.9	498	500	96.2	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Associated samples MP17817: MC4052-2, MC4052-4, MC4052-6, MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/30/11

Metal	MC4052-4 Original	MSD	Spikelot MPICP3	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	1.2	539	500	107.6	1.1	20
Barium	549	2600	2000	102.6	0.4	20
Beryllium	anr					
Boron	anr					
Cadmium	0.0	552	500	110.4	0.7	20
Calcium						
Chromium	1.1	501	500	100.0	0.6	20
Cobalt						
Copper	1.8	537	500	107.0	0.9	20
Gold						
Iron						
Lead	0.0	944	1000	94.4	1.2	20
Lithium	anr					
Magnesium						
Manganese						
Molybdenum						
Nickel	3.7	482	500	95.7	0.8	20
Palladium						
Platinum						
Potassium						
Selenium	0.0	533	500	106.6	0.4	20
Silicon						
Silver	0.0	231	200	115.5	0.4	20
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	anr					
Zinc	16.9	492	500	95.0	1.2	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Associated samples MP17817: MC4052-2, MC4052-4, MC4052-6, MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			09/30/11					09/30/11	
Metal	BSP Result	Spikelot MPICP3	% Rec	QC Limits	BSD Result	Spikelot MPICP3	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	510	500	102.0	80-120	508	500	101.6	0.4	20
Barium	2050	2000	102.5	80-120	2030	2000	101.5	1.0	20
Beryllium	anr								
Boron	anr								
Cadmium	515	500	103.0	80-120	517	500	103.4	0.4	20
Calcium									
Chromium	512	500	102.4	80-120	519	500	103.8	1.4	20
Cobalt									
Copper	512	500	102.4	80-120	535	500	107.0	4.4	20
Gold									
Iron									
Lead	990	1000	99.0	80-120	985	1000	98.5	0.5	20
Lithium	anr								
Magnesium									
Manganese									
Molybdenum									
Nickel	499	500	99.8	80-120	501	500	100.2	0.4	20
Palladium									
Platinum									
Potassium									
Selenium	507	500	101.4	80-120	512	500	102.4	1.0	20
Silicon									
Silver	208	200	104.0	80-120	217	200	108.5	4.2	20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	493	500	98.6	80-120	488	500	97.6	1.0	20

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Associated samples MP17817: MC4052-2, MC4052-4, MC4052-6, MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/30/11

Metal	MC4052-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	1.20	0.00	100.0(a)	0-10
Barium	549	545	0.6	0-10
Beryllium	anr			
Boron	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	1.10	0.00	100.0(a)	0-10
Cobalt				
Copper	1.80	0.00	100.0(a)	0-10
Gold				
Iron				
Lead	0.00	0.00	NC	0-10
Lithium	anr			
Magnesium				
Manganese				
Molybdenum				
Nickel	3.70	3.70	0.0	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	16.9	17.4	3.0	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17817
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

Associated samples MP17817: MC4052-2, MC4052-4, MC4052-6, MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17838
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/01/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	-0.049	<0.20

Associated samples MP17838: MC4052-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17838
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/01/11 10/01/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.8	3	93.3	80-120	2.9	3	96.7	3.5	20

Associated samples MP17838: MC4052-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17877
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/06/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	-0.056	<0.20

Associated samples MP17877: MC4052-4, MC4052-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.3.1

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17877
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/06/11 10/06/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.0	3	100.0	80-120	3.1	3	103.3	3.3	20

Associated samples MP17877: MC4052-4, MC4052-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.3.2

7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17886 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/07/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	0.0070	<0.20

Associated samples MP17886: MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.4.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17886
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/07/11

Metal	MC4052-8 Original	MS	Spikelot HGRWS1	% Rec	QC Limits
Mercury	0.0	3.2	3	106.7	75-125

Associated samples MP17886: MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

7.4.2

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17886 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/07/11

Metal	MC4052-8 Original	MSD	Spikelot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.1	3	103.3	3.2	20

Associated samples MP17886: MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

7.4.2

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

QC Batch ID: MP17886
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/07/11 10/07/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.2	3	106.7	80-120	3.0	3	100.0	6.5	20

Associated samples MP17886: MC4052-8, MC4052-11, MC4052-13, MC4052-15, MC4052-17

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN36322	0.010	0.0	mg/l	0.1	0.10	100.0	85-115%

Associated Samples:
Batch GN36322: MC4052-12, MC4052-16, MC4052-5, MC4052-7
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chromium, Hexavalent	GN36322	mg/l	0.1	0.10	0.0	20%

Associated Samples:
Batch GN36322: MC4052-12, MC4052-16, MC4052-5, MC4052-7
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN36322	MC4052-7	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GN36322: MC4052-12, MC4052-16, MC4052-5, MC4052-7
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4052
Account: LEA - Loureiro Eng. Associates
Project: PWCTEH:Willow Brook - Pond W. East Hartford

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN36322	MC4052-7	mg/l	0.0	0.1	0.11	110.0	85-115%

Associated Samples:
Batch GN36322: MC4052-12, MC4052-16, MC4052-5, MC4052-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

New England ACCUTEST LABORATORIES

10/28/11

Technical Report for

Loureiro Eng. Associates

UTC:P&W Willow Pond Quarterly GW Monitoring

88UT043

Accutest Job Number: MC4100

Sampling Dates: 09/28/11 - 09/29/11

Report to:

Loureiro Eng. Associates

hmgrimm@loureiro.com

ATTN: Heather Grimm

Total number of pages in report: **108**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) ISO 17025:2005 (L2235)

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Accutest Laboratories

Sample Summary

Loureiro Eng. Associates

Job No: MC4100

UTC:P&W Willow Pond Quarterly GW Monitoring
Project No: 88UT043

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC4100-1	09/29/11	10:20	AD	09/29/11	AQ	Ground Water	1241018
MC4100-2	09/29/11	10:20	AD	09/29/11	AQ	Ground Water	1241018UF
MC4100-3	09/29/11	12:10	AD	09/29/11	AQ	Ground Water	1241022
MC4100-4	09/29/11	12:10	AD	09/29/11	AQ	Ground Water	1241022UF
MC4100-5	09/29/11	14:38	AD	09/29/11	AQ	Ground Water	1241023
MC4100-6	09/29/11	14:30	AD	09/29/11	AQ	Ground Water	1241023UF
MC4100-7	09/29/11	12:20	AD	09/29/11	AQ	Ground Water	1241024
MC4100-8	09/29/11	12:20	AD	09/29/11	AQ	Ground Water	1241024UF
MC4100-9	09/29/11	14:30	AD	09/29/11	AQ	Ground Water	1241025
MC4100-10	09/29/11	14:38	AD	09/29/11	AQ	Ground Water	1241025UF
MC4100-11	09/29/11	10:00	AD	09/29/11	AQ	Ground Water	1241027
MC4100-12	09/28/11	11:20	AD	09/29/11	AQ	Ground Water	1241367
MC4100-13	09/28/11	11:20	AD	09/29/11	AQ	Ground Water	1241367UF

Accutest Laboratories

Sample Summary
(continued)

Loureiro Eng. Associates

Job No: MC4100

UTC:P&W Willow Pond Quarterly GW Monitoring
Project No: 88UT043

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC4100-14	09/28/11	11:50	AD	09/29/11	AQ	Ground Water	1241368

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Loureiro Eng. Associates	**Job No**	MC4100
Site:	UTC:P&W Willow Pond Quarterly GW Monitoring	**Report Date**	10/14/2011 10:53:15 AM

14 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on between 09/28/2011 and 09/29/2011 and were received at Accutest on 09/29/2011 properly preserved, at 1.8 Deg. C and intact. These Samples received an Accutest job number of MC4100. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** MSG4495

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC4100-7: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.
- Continuing calibration check standard MSG4495-CC4471 for dichlorodifluoromethane exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration verification standard MSG4471-ICV4471 for acetone, 2-butanone, 2-hexanone exceeds 35% Difference.

Matrix AQ **Batch ID:** MSG4496

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard MSG4496-CC4471 for dichlorodifluoromethane exceed 30% Difference. This check standard met RCP criteria.

Extractables by GC By Method CT-ETPH 7/06

Matrix AQ **Batch ID:** OP26492

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ **Batch ID:** OP26501

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082

Matrix AQ	Batch ID: OP26457

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: OP26493

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC4100-5 for Tetrachloro-m-xylene: Outside control limits due to possible matrix interference.

Metals By Method SW846 6010C

Matrix AQ	Batch ID: MP17833

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4076-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Nickel are outside control limits for sample MP17833-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP17833-SD1 for Zinc: Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- Only metals requested.

Matrix AQ	Batch ID: MP17834

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4100-4MS, MC4100-4MSD, MC4100-4SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Chromium, Copper are outside control limits for sample MP17834-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP17834-SD1 for Zinc: Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- Only metals requested.

Metals By Method SW846 7470A

Matrix AQ	Batch ID: MP17888

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SW846 7196A

Matrix AQ	Batch ID: GN36351

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC4100-5MS, MC4100-5DUP were used as the QC samples for Chromium, Hexavalent.
- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GN36351-D1. RPD acceptable due to low duplicate and sample concentrations.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC4100).

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1241018		
Lab Sample ID:	MC4100-1	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111520.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241018		
Lab Sample ID:	MC4100-1	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241018		
Lab Sample ID:	MC4100-1	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241018		
Lab Sample ID:	MC4100-1	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI7556A.D	1	10/08/11	SL	10/06/11	OP26501	GBI328
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.115	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241018		
Lab Sample ID:	MC4100-1	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6475.D	1	10/13/11	AP	10/05/11	OP26493	GBK272
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		30-150%
877-09-8	Tetrachloro-m-xylene	88%		30-150%
2051-24-3	Decachlorobiphenyl	93%		30-150%
2051-24-3	Decachlorobiphenyl	88%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241018UF		
Lab Sample ID:	MC4100-2	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	65.5	50	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	10/01/11	10/03/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13465
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17833
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241022		
Lab Sample ID:	MC4100-3	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111521.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241022		
Lab Sample ID:	MC4100-3	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.7	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	17.0	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241022		
Lab Sample ID:	MC4100-3	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241022		
Lab Sample ID:	MC4100-3	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI7558.D	1	10/08/11	SL	10/06/11	OP26501	GBI328
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.181	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241022		
Lab Sample ID:	MC4100-3	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6476.D	1	10/13/11	AP	10/05/11	OP26493	GBK272
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		30-150%
877-09-8	Tetrachloro-m-xylene	96%		30-150%
2051-24-3	Decachlorobiphenyl	83%		30-150%
2051-24-3	Decachlorobiphenyl	78%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241022UF		
Lab Sample ID:	MC4100-4	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	281	50	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13462
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17834
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111522.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.7	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	20.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	24.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	4.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	13.1	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	20.1	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI7560.D	1	10/08/11	SL	10/06/11	OP26501	GBI328
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	1.23	0.087	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6477.D	1	10/13/11	AP	10/05/11	OP26493	GBK272
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		30-150%
877-09-8	Tetrachloro-m-xylene	571% [a]		30-150%
2051-24-3	Decachlorobiphenyl	80%		30-150%
2051-24-3	Decachlorobiphenyl	78%		30-150%

(a) Outside control limits due to possible matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241023		
Lab Sample ID:	MC4100-5	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	09/30/11 10:45	MA	SW846 7196A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241023UF		
Lab Sample ID:	MC4100-6	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	199	50	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	336	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	588	25	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	2370	40	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	95.2	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	24.6	20	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13462
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17834
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241024		
Lab Sample ID:	MC4100-7	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	G111523.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241024		
Lab Sample ID:	MC4100-7	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241024		
Lab Sample ID:	MC4100-7	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241024		
Lab Sample ID:	MC4100-7	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI7562.D	1	10/08/11	SL	10/06/11	OP26501	GBI328
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.135	0.087	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241024		
Lab Sample ID:	MC4100-7	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6478.D	1	10/13/11	AP	10/05/11	OP26493	GBK272
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		30-150%
877-09-8	Tetrachloro-m-xylene	107%		30-150%
2051-24-3	Decachlorobiphenyl	106%		30-150%
2051-24-3	Decachlorobiphenyl	99%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241024UF		
Lab Sample ID:	MC4100-8	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	55.2	50	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13462
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17834
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241025		
Lab Sample ID:	MC4100-9	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111524.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241025		
Lab Sample ID:	MC4100-9	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241025		
Lab Sample ID:	MC4100-9	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241025		
Lab Sample ID:	MC4100-9	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BI7564.D	1	10/08/11	SL	10/06/11	OP26501	GBI328
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	0.213	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241025		
Lab Sample ID:	MC4100-9	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6479.D	1	10/13/11	AP	10/05/11	OP26493	GBK272
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	97%		30-150%
877-09-8	Tetrachloro-m-xylene	95%		30-150%
2051-24-3	Decachlorobiphenyl	87%		30-150%
2051-24-3	Decachlorobiphenyl	83%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241025UF		
Lab Sample ID:	MC4100-10	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	12.8	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	80.4	50	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 4.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	< 40	40	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13462
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17834
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241027		
Lab Sample ID:	MC4100-11	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111519.D	1	10/09/11	AT	n/a	n/a	MSG4495
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241027		
Lab Sample ID:	MC4100-11	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241027		
Lab Sample ID:	MC4100-11	**Date Sampled:**	09/29/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241367		
Lab Sample ID:	MC4100-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G111554.D	1	10/10/11	AT	n/a	n/a	MSG4496
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	103	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	97.6	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241367		
Lab Sample ID:	MC4100-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	66.1	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	36.0	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	104	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241367		
Lab Sample ID:	MC4100-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241367		
Lab Sample ID:	MC4100-12	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	SW846 8082 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK6351.D	1	10/07/11	AP	10/03/11	OP26457	GBK268
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	5.0 ml
Run #2		

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	0.86	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		30-150%
877-09-8	Tetrachloro-m-xylene	74%		30-150%
2051-24-3	Decachlorobiphenyl	72%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1241367UF		
Lab Sample ID:	MC4100-13	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
		Percent Solids:	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	7.0	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Barium	389	50	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Cadmium	95.6	4.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Chromium	199	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Copper	39.8	25	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	10/07/11	10/07/11	MA	SW846 7470A [2]	SW846 7470A [4]
Nickel	597	40	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Silver	< 5.0	5.0	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]
Zinc	30.6	20	ug/l	1	10/01/11	10/02/11	DA	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13462
(2) Instrument QC Batch: MA13484
(3) Prep QC Batch: MP17834
(4) Prep QC Batch: MP17888

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1241368		
Lab Sample ID:	MC4100-14	**Date Sampled:**	09/28/11
Matrix:	AQ - Ground Water	**Date Received:**	09/29/11
Method:	CT-ETPH 7/06 SW846 3510C	**Percent Solids:**	n/a
Project:	UTC:P&W Willow Pond Quarterly GW Monitoring		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BC54982.D	1	10/13/11	KD	10/05/11	OP26492	GBC2627
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	1.13	0.080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		50-149%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle

Parameter Certification Exceptions

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	**SW846 8082**	AQ	Certified by SOP MGC204/GC-ECD

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: MC4100

Client / Reporting Information

Company Name: Lawrence Engineering Associates
Street Address: 100 Northwest Drive
City State Zip: Plainville, CT 06062
Project Contact: Joe Tracchi jtracchi@lawrenco.com
Phone #: 860.747.6481
Fax #:
Sampler(s) Name(s):
Phone #:

Project Information

Project Name: (UTC Pow Willow Pond GW)
Street:
City: East Hartford, CT
Project #:
Client PO#:
Project Manager: Adam Dubocy

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:
PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
FB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample # (MC4100)	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	VOCs by 8260B	PCBs by 8082	CT ETPH	Total PCBs (Aroclor Cu)	Cu							LAB USE ONLY
-1	1241018		9-29-11	1020	DR	GW	6	2				4					X	X	X									
-2	1241018uf			1020	DR	GW	1			1										X								
-3	1241022			1210	DR	GW	6	2				4					X	X	X									
-4	1241022uf			1210	DR	GW	1			1										X								
-5	1241023			1430	DR	GW	7	2				5					X	X	X		X							
-6	1241023uf			1430	DR	GW	1			1										X								
-7	1241024			1220	DR	GW	6	2				4					X	X	X									
-8	1241024uf			1220	DR	GW	1			1										X								
-9	1241025			1438	DR	GW	6	2				4					X	X	X									
-10	1241025uf			1438	DR	GW	1			1										X								
-11	1241027		9-29-11	1000	DR	GW	1	1									X											

Turnaround Time (Business days)

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format CEA
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Please provide DCP (CT) analytical list for VOCs & PCBs

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	9-29-11 1600	1	2	9-29-11 1845	2
Relinquished by Sampler 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [x] Cooler Temp. 1.8, 1.9

4.2 4

MC4100: Chain of Custody
Page 1 of 3

ACCUTEST Laboratories 2 of 2

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:
ACCUTEST QUOTE #: MC4100

CLIENT INFORMATION

NAME: LEA
ADDRESS: 100 Northwest Dr.
CITY: Plainville STATE: CT ZIP: 06062
SEND REPORT TO: JTTRZASKI@LOUREIRO.COM
PHONE #: 860-747-6181

FACILITY INFORMATION

PROJECT NAME: P+W EH Willow Pond GW
LOCATION: 88UT059
PROJECT NO.:
FAX #: 860-747-8822

ANALYTICAL INFORMATION

ACCUTEST SAMPLE # MC4100	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	VOCs 8260B	PCBs 8082	DCRA8 metals, +Cu, Ni, Zn	ETPH	LAB USE ONLY
	1241367	9/28/11	1120	AC	GW	2	2					✓				
-12	↓ ↓	↓	↓	↓	↓	2					2		✓			
-13	1241367uf		1120			1			1					✓		
-14	1241368		1150			2					2				✓	

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- [x] 14 DAYS STANDARD
- [ ] 7 DAYS RUSH
- [ ] 48 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

14 DAY TURNAROUND HARDCOPY, EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [ ] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [x] OTHER (SPECIFY) LEA EDD

COMMENTS/REMARKS

CT RCP Deliverable

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	9-29-11 1660	1. [signature]	2. B		2. B
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☑ TEMPERATURE C

MC4100: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC4100 **Client:** LEA **Immediate Client Services Action Required:** No

Date / Time Received: 9/29/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 2 **Airbill #'s:**

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC4100: Chain of Custody
Page 3 of 3

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Accutest New England **Client:** Loureiro Eng. Associates

Project Location: UTC:P&W Willow Pond Quarterly GW Monitoring **Project Number:** 88UT043.001

Sampling Date(s): 9/29/2011

Laboratory Sample ID(s): MC4100-1, MC4100-2, MC4100-3, MC4100-4, MC4100-5, MC4100-6, MC4100-7, MC4100-8, MC4100-9, MC4100-10, MC4100-11, MC4100-12, MC4100-13, MC4100-14

Methods: Refer to case narrative.

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☐ No ☐ NA ☑
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☐ No ☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☐ No ☑
	b) Were these reporting limits met?	Yes ☐ No ☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☑ No ☐

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Position: Lab Director

Printed Name: Reza Tand Date: 10/14/2011
Accutest New England

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4100

UTC:P&W Willow Pond Quarterly GW Monitoring
Project No: 88UT043

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4100-1 1241018	Collected: 29-SEP-11 10:20 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-1	CT-ETPH 7/06	08-OCT-11 11:47	SL	06-OCT-11	AJ	BCTTPH
MC4100-1	SW846 8260B	09-OCT-11 15:36	AT			V8260RCP
MC4100-1	SW846 8082	13-OCT-11 10:24	AP	05-OCT-11	AJ	P8082RCP
MC4100-2 1241018UF	Collected: 29-SEP-11 10:20 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-2	SW846 6010C	03-OCT-11 20:21	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4100-2	SW846 7470A	07-OCT-11 15:13	MA	07-OCT-11	MA	HG
MC4100-3 1241022	Collected: 29-SEP-11 12:10 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-3	CT-ETPH 7/06	08-OCT-11 12:25	SL	06-OCT-11	AJ	BCTTPH
MC4100-3	SW846 8260B	09-OCT-11 16:04	AT			V8260RCP
MC4100-3	SW846 8082	13-OCT-11 10:45	AP	05-OCT-11	AJ	P8082RCP
MC4100-4 1241022UF	Collected: 29-SEP-11 12:10 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-4	SW846 6010C	02-OCT-11 14:42	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4100-4	SW846 7470A	07-OCT-11 15:15	MA	07-OCT-11	MA	HG
MC4100-5 1241023	Collected: 29-SEP-11 14:38 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-5	SW846 7196A	30-SEP-11 10:45	MA			XCR
MC4100-5	CT-ETPH 7/06	08-OCT-11 13:03	SL	06-OCT-11	AJ	BCTTPH
MC4100-5	SW846 8260B	09-OCT-11 16:32	AT			V8260RCP
MC4100-5	SW846 8082	13-OCT-11 11:06	AP	05-OCT-11	AJ	P8082RCP
MC4100-6 1241023UF	Collected: 29-SEP-11 14:30 By: AD		Received: 29-SEP-11 By: SAP			

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4100

UTC:P&W Willow Pond Quarterly GW Monitoring
Project No: 88UT043

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4100-6	SW846 6010C	02-OCT-11 15:17	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4100-6	SW846 7470A	07-OCT-11 15:18	MA	07-OCT-11	MA	HG
MC4100-7 1241024	Collected: 29-SEP-11 12:20 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-7	CT-ETPH 7/06	08-OCT-11 13:42	SL	06-OCT-11	AJ	BCTTPH
MC4100-7	SW846 8260B	09-OCT-11 16:59	AT			V8260RCP
MC4100-7	SW846 8082	13-OCT-11 11:27	AP	05-OCT-11	AJ	P8082RCP
MC4100-8 1241024UF	Collected: 29-SEP-11 12:20 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-8	SW846 6010C	02-OCT-11 15:21	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4100-8	SW846 7470A	07-OCT-11 15:20	MA	07-OCT-11	MA	HG
MC4100-9 1241025	Collected: 29-SEP-11 14:30 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-9	CT-ETPH 7/06	08-OCT-11 14:20	SL	06-OCT-11	AJ	BCTTPH
MC4100-9	SW846 8260B	09-OCT-11 17:27	AT			V8260RCP
MC4100-9	SW846 8082	13-OCT-11 11:48	AP	05-OCT-11	AJ	P8082RCP
MC4100-10 1241025UF	Collected: 29-SEP-11 14:38 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-10	SW846 6010C	02-OCT-11 15:08	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE,ZN
MC4100-10	SW846 7470A	07-OCT-11 15:23	MA	07-OCT-11	MA	HG
MC4100-11 1241027	Collected: 29-SEP-11 10:00 By: AD		Received: 29-SEP-11 By: SAP			
MC4100-11	SW846 8260B	09-OCT-11 15:08	AT			V8260RCP
MC4100-12 1241367	Collected: 28-SEP-11 11:20 By: AD		Received: 29-SEP-11 By: SAP			

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: MC4100

UTC:P&W Willow Pond Quarterly GW Monitoring
Project No: 88UT043

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC4100-12	SW846 8082	07-OCT-11 20:07	AP	03-OCT-11	MEW	P8082RCP
MC4100-12	SW846 8260B	10-OCT-11 07:15	AT			V8260RCP
MC4100-13	Collected: 28-SEP-11 11:20 By: AD		Received: 29-SEP-11 By: SAP			
1241367UF						
MC4100-13	SW846 6010C	02-OCT-11 15:12	DA	01-OCT-11	EM	AG,AS,BA,CD,CR,CU,NI,PB,SE, ZN
MC4100-13	SW846 7470A	07-OCT-11 15:25	MA	07-OCT-11	MA	HG
MC4100-14	Collected: 28-SEP-11 11:50 By: AD		Received: 29-SEP-11 By: SAP			
1241368						
MC4100-14	CT-ETPH 7/06	13-OCT-11 09:44	KD	05-OCT-11	AJ	BCTTPH

New England ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-MB	G111518.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-MB	G111544.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-MB	G111544.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-MB	G111544.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	63.1	126	62.5	125	1	70-130/25
107-13-1	Acrylonitrile	50	51.3	103	50.0	100	3	70-130/25
71-43-2	Benzene	50	47.9	96	50.8	102	6	70-130/25
108-86-1	Bromobenzene	50	41.8	84	43.6	87	4	70-130/25
75-27-4	Bromodichloromethane	50	49.2	98	50.6	101	3	70-130/25
75-25-2	Bromoform	50	44.4	89	45.5	91	2	70-130/25
74-83-9	Bromomethane	50	47.0	94	50.0	100	6	70-130/25
78-93-3	2-Butanone (MEK)	50	57.2	114	46.7	93	20	70-130/25
104-51-8	n-Butylbenzene	50	47.2	94	49.8	100	5	70-130/25
135-98-8	sec-Butylbenzene	50	47.6	95	50.8	102	7	70-130/25
98-06-6	tert-Butylbenzene	50	44.6	89	47.8	96	7	70-130/25
75-15-0	Carbon disulfide	50	52.2	104	53.5	107	2	70-130/25
56-23-5	Carbon tetrachloride	50	48.1	96	49.4	99	3	70-130/25
108-90-7	Chlorobenzene	50	45.1	90	47.0	94	4	70-130/25
75-00-3	Chloroethane	50	49.6	99	51.4	103	4	70-130/25
67-66-3	Chloroform	50	50.1	100	52.3	105	4	70-130/25
74-87-3	Chloromethane	50	46.4	93	48.2	96	4	70-130/25
95-49-8	o-Chlorotoluene	50	41.7	83	44.3	89	6	70-130/25
106-43-4	p-Chlorotoluene	50	45.5	91	47.4	95	4	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	45.9	92	44.4	89	3	70-130/25
124-48-1	Dibromochloromethane	50	46.9	94	48.7	97	4	70-130/25
106-93-4	1,2-Dibromoethane	50	46.7	93	49.0	98	5	70-130/25
95-50-1	1,2-Dichlorobenzene	50	46.6	93	50.2	100	7	70-130/25
541-73-1	1,3-Dichlorobenzene	50	45.4	91	48.4	97	6	70-130/25
106-46-7	1,4-Dichlorobenzene	50	45.7	91	48.5	97	6	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.4	79	38.1	76	3	70-130/25
75-34-3	1,1-Dichloroethane	50	50.0	100	51.8	104	4	70-130/25
107-06-2	1,2-Dichloroethane	50	49.2	98	51.5	103	5	70-130/25
75-35-4	1,1-Dichloroethene	50	52.3	105	55.0	110	5	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	46.0	92	47.5	95	3	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	50.9	102	4	70-130/25
78-87-5	1,2-Dichloropropane	50	48.8	98	50.6	101	4	70-130/25
142-28-9	1,3-Dichloropropane	50	45.4	91	47.3	95	4	70-130/25
594-20-7	2,2-Dichloropropane	50	54.7	109	53.1	106	3	70-130/25
563-58-6	1,1-Dichloropropene	50	48.9	98	50.8	102	4	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	45.2	90	47.8	96	6	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	48.1	96	51.2	102	6	70-130/25
100-41-4	Ethylbenzene	50	46.5	93	48.2	96	4	70-130/25
76-13-1	Freon 113	50	52.0	104	53.9	108	4	70-130/25
87-68-3	Hexachlorobutadiene	50	46.9	94	49.4	99	5	70-130/25
591-78-6	2-Hexanone	50	47.6	95	51.3	103	7	70-130/25
98-82-8	Isopropylbenzene	50	49.0	98	51.4	103	5	70-130/25
99-87-6	p-Isopropyltoluene	50	49.0	98	51.3	103	5	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	47.7	95	48.2	96	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.4	95	50.7	101	7	70-130/25
74-95-3	Methylene bromide	50	48.5	97	51.2	102	5	70-130/25
75-09-2	Methylene chloride	50	48.5	97	50.0	100	3	70-130/25
91-20-3	Naphthalene	50	40.4	81	41.8	84	3	70-130/25
103-65-1	n-Propylbenzene	50	45.4	91	47.9	96	5	70-130/25
100-42-5	Styrene	50	45.0	90	47.5	95	5	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	44.7	89	45.2	90	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	43.7	87	44.2	88	1	70-130/25
127-18-4	Tetrachloroethene	50	45.3	91	47.1	94	4	70-130/25
109-99-9	Tetrahydrofuran	50	49.0	98	50.2	100	2	70-130/25
108-88-3	Toluene	50	48.2	96	51.1	102	6	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	40.0	80	42.3	85	6	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	39.6	79	43.1	86	8	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	42.5	85	43.5	87	2	70-130/25
71-55-6	1,1,1-Trichloroethane	50	53.2	106	51.7	103	3	70-130/25
79-00-5	1,1,2-Trichloroethane	50	48.2	96	50.1	100	4	70-130/25
79-01-6	Trichloroethene	50	47.8	96	50.0	100	4	70-130/25
75-69-4	Trichlorofluoromethane	50	47.2	94	49.7	99	5	70-130/25
96-18-4	1,2,3-Trichloropropane	50	42.2	84	44.3	89	5	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	45.3	91	47.9	96	6	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	43.6	87	45.8	92	5	70-130/25
75-01-4	Vinyl chloride	50	44.2	88	46.5	93	5	70-130/25
	m,p-Xylene	100	93.3	93	96.8	97	4	70-130/25
95-47-6	o-Xylene	50	46.9	94	48.8	98	4	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4495-BS	G111516.D	1	10/09/11	AT	n/a	n/a	MSG4495
MSG4495-BSD	G111517.D	1	10/09/11	AT	n/a	n/a	MSG4495

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9, MC4100-11

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	100%	70-130%
2037-26-5	Toluene-D8	103%	104%	70-130%
460-00-4	4-Bromofluorobenzene	78%	79%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-BS	G111542.D	1	10/10/11	AT	n/a	n/a	MSG4496
MSG4496-BSD	G111543.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	56.9	114	56.4	113	1	70-130/25
107-13-1	Acrylonitrile	50	49.7	99	49.4	99	1	70-130/25
71-43-2	Benzene	50	49.0	98	49.2	98	0	70-130/25
108-86-1	Bromobenzene	50	43.4	87	40.9	82	6	70-130/25
75-27-4	Bromodichloromethane	50	49.3	99	48.7	97	1	70-130/25
75-25-2	Bromoform	50	44.8	90	44.1	88	2	70-130/25
74-83-9	Bromomethane	50	50.4	101	49.3	99	2	70-130/25
78-93-3	2-Butanone (MEK)	50	50.0	100	40.7	81	21	70-130/25
104-51-8	n-Butylbenzene	50	47.8	96	45.3	91	5	70-130/25
135-98-8	sec-Butylbenzene	50	49.8	100	47.2	94	5	70-130/25
98-06-6	tert-Butylbenzene	50	46.9	94	44.7	89	5	70-130/25
75-15-0	Carbon disulfide	50	52.8	106	51.1	102	3	70-130/25
56-23-5	Carbon tetrachloride	50	49.7	99	48.4	97	3	70-130/25
108-90-7	Chlorobenzene	50	46.6	93	45.2	90	3	70-130/25
75-00-3	Chloroethane	50	49.1	98	49.8	100	1	70-130/25
67-66-3	Chloroform	50	52.0	104	49.8	100	4	70-130/25
74-87-3	Chloromethane	50	47.9	96	44.2	88	8	70-130/25
95-49-8	o-Chlorotoluene	50	44.0	88	41.7	83	5	70-130/25
106-43-4	p-Chlorotoluene	50	46.9	94	44.7	89	5	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	42.1	84	42.5	85	1	70-130/25
124-48-1	Dibromochloromethane	50	47.4	95	46.0	92	3	70-130/25
106-93-4	1,2-Dibromoethane	50	47.9	96	47.6	95	1	70-130/25
95-50-1	1,2-Dichlorobenzene	50	48.7	97	47.3	95	3	70-130/25
541-73-1	1,3-Dichlorobenzene	50	47.2	94	45.4	91	4	70-130/25
106-46-7	1,4-Dichlorobenzene	50	47.9	96	45.1	90	6	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.0	78	38.2	76	2	70-130/25
75-34-3	1,1-Dichloroethane	50	50.7	101	49.6	99	2	70-130/25
107-06-2	1,2-Dichloroethane	50	51.0	102	50.9	102	0	70-130/25
75-35-4	1,1-Dichloroethene	50	50.9	102	51.6	103	1	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	46.4	93	44.2	88	5	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	49.5	99	48.7	97	2	70-130/25
78-87-5	1,2-Dichloropropane	50	50.8	102	49.4	99	3	70-130/25
142-28-9	1,3-Dichloropropane	50	47.5	95	46.2	92	3	70-130/25
594-20-7	2,2-Dichloropropane	50	41.4	83	42.6	85	3	70-130/25
563-58-6	1,1-Dichloropropene	50	49.4	99	48.3	97	2	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	44.3	89	44.0	88	1	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-BS	G111542.D	1	10/10/11	AT	n/a	n/a	MSG4496
MSG4496-BSD	G111543.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	46.8	94	46.7	93	0	70-130/25
100-41-4	Ethylbenzene	50	48.7	97	46.9	94	4	70-130/25
76-13-1	Freon 113	50	52.6	105	51.0	102	3	70-130/25
87-68-3	Hexachlorobutadiene	50	46.6	93	45.6	91	2	70-130/25
591-78-6	2-Hexanone	50	47.5	95	45.1	90	5	70-130/25
98-82-8	Isopropylbenzene	50	50.3	101	48.2	96	4	70-130/25
99-87-6	p-Isopropyltoluene	50	50.5	101	48.1	96	5	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	47.4	95	47.8	96	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.6	93	46.4	93	0	70-130/25
74-95-3	Methylene bromide	50	51.0	102	49.4	99	3	70-130/25
75-09-2	Methylene chloride	50	50.3	101	47.3	95	6	70-130/25
91-20-3	Naphthalene	50	40.1	80	40.2	80	0	70-130/25
103-65-1	n-Propylbenzene	50	47.0	94	44.4	89	6	70-130/25
100-42-5	Styrene	50	46.8	94	44.9	90	4	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	46.1	92	44.3	89	4	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	39.5	79	39.4	79	0	70-130/25
127-18-4	Tetrachloroethene	50	47.3	95	45.2	90	5	70-130/25
109-99-9	Tetrahydrofuran	50	50.4	101	46.3	93	8	70-130/25
108-88-3	Toluene	50	49.6	99	49.6	99	0	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	36.9	74	36.4	73	1	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	40.4	81	39.4	79	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	41.4	83	40.1	80	3	70-130/25
71-55-6	1,1,1-Trichloroethane	50	53.1	106	52.3	105	2	70-130/25
79-00-5	1,1,2-Trichloroethane	50	49.4	99	50.4	101	2	70-130/25
79-01-6	Trichloroethene	50	53.1	106	50.3	101	5	70-130/25
75-69-4	Trichlorofluoromethane	50	47.1	94	46.4	93	1	70-130/25
96-18-4	1,2,3-Trichloropropane	50	41.8	84	41.1	82	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	47.2	94	45.5	91	4	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	45.5	91	42.6	85	7	70-130/25
75-01-4	Vinyl chloride	50	45.8	92	44.8	90	2	70-130/25
	m,p-Xylene	100	95.9	96	92.2	92	4	70-130/25
95-47-6	o-Xylene	50	49.0	98	46.8	94	5	70-130/25

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG4496-BS	G111542.D	1	10/10/11	AT	n/a	n/a	MSG4496
MSG4496-BSD	G111543.D	1	10/10/11	AT	n/a	n/a	MSG4496

The QC reported here applies to the following samples: **Method:** SW846 8260B

MC4100-12

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	70-130%
2037-26-5	Toluene-D8	102%	105%	70-130%
460-00-4	4-Bromofluorobenzene	79%	79%	70-130%

Volatile Internal Standard Area Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Check Std: MSG4495-CC4471 **Injection Date:** 10/09/11
Lab File ID: G111515.D **Injection Time:** 13:17
Instrument ID: GCMSG **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	74586	9.11	120162	9.99	67873	13.27	63344	15.85	36682	6.64
Upper Limit [a]	149172	9.61	240324	10.49	135746	13.77	126688	16.35	73364	7.14
Lower Limit [b]	37293	8.61	60081	9.49	33937	12.77	31672	15.35	18341	6.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG4495-BS	78141	9.11	125946	9.99	69482	13.27	65040	15.84	35793	6.65
MSG4495-BSD	80661	9.11	126232	9.99	71124	13.27	65608	15.84	34749	6.64
MSG4495-MB	80430	9.11	125360	9.99	66031	13.27	45884	15.85	40289	6.65
MC4100-11	79862	9.11	122015	9.99	64449	13.27	45512	15.85	35730	6.67
MC4100-1	78947	9.11	126029	9.99	64939	13.27	44456	15.85	32979	6.65
MC4100-3	78578	9.11	124827	9.99	65589	13.27	44322	15.85	29480	6.65
MC4100-5	78109	9.11	123460	9.99	67437	13.27	46297	15.85	40010	6.67
MC4100-7 [c]	77268	9.11	120974	9.99	64051	13.27	43806	15.85	34062	6.65
MC4100-9	75299	9.11	121220	9.99	64423	13.27	44105	15.85	36280	6.65
ZZZZZZ	76189	9.11	121207	9.99	64898	13.27	45531	15.85	37786	6.65
ZZZZZZ	76537	9.11	122341	9.99	64624	13.27	43615	15.85	31843	6.65
ZZZZZZ	75777	9.11	120937	9.99	64632	13.27	43372	15.85	35858	6.66
ZZZZZZ	77326	9.11	121965	9.99	64776	13.27	43926	15.85	35286	6.65
ZZZZZZ	76317	9.11	118448	9.99	64415	13.27	43391	15.85	29634	6.64
ZZZZZZ	74052	9.11	117497	9.99	62626	13.27	42042	15.85	32579	6.65
ZZZZZZ	76588	9.11	122131	9.99	64045	13.27	42564	15.85	33367	6.65
ZZZZZZ	74313	9.11	119892	9.99	62852	13.27	41198	15.85	34972	6.65
ZZZZZZ	76069	9.11	120394	9.99	64939	13.27	42911	15.85	33848	6.64
ZZZZZZ	76984	9.11	122686	9.99	64356	13.27	43018	15.85	34117	6.65
ZZZZZZ	74984	9.11	119730	9.99	63645	13.27	43121	15.85	32140	6.64
MC4115-33	76252	9.11	121141	9.99	64444	13.27	41779	15.85	32919	6.64
MC4115-33MS	75803	9.11	123177	9.99	68400	13.27	64194	15.84	32981	6.64
MC4115-33MSD	76144	9.11	121223	9.99	67873	13.27	63629	15.84	33477	6.64
ZZZZZZ	76968	9.11	121212	9.99	64955	13.27	43989	15.85	35004	6.65

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

Volatile Internal Standard Area Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Check Std:	MSG4496-CC4471	**Injection Date:**	10/10/11
Lab File ID:	G111541.D	**Injection Time:**	01:17
Instrument ID:	GCMSG	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	75605	9.11	121192	9.99	68255	13.27	62033	15.84	35089	6.64
Upper Limit [a]	151210	9.61	242384	10.49	136510	13.77	124066	16.34	70178	7.14
Lower Limit [b]	37803	8.61	60596	9.49	34128	12.77	31017	15.34	17545	6.14

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG4496-BS	77171	9.11	122141	9.99	67406	13.27	62865	15.84	30237	6.64
MSG4496-BSD	75904	9.11	117841	9.99	66716	13.27	62509	15.84	29050	6.64
MSG4496-MB	74852	9.11	121361	9.99	63815	13.27	44723	15.85	30670	6.65
ZZZZZZ	75194	9.11	118971	9.99	63581	13.27	43300	15.85	28693	6.65
ZZZZZZ	75182	9.11	122941	9.99	64352	13.27	44143	15.85	32636	6.65
MC4159-1	75192	9.11	118514	9.99	60741	13.27	42007	15.85	31750	6.65
ZZZZZZ	74424	9.11	118132	9.99	64062	13.27	42041	15.85	31799	6.65
ZZZZZZ	76024	9.11	120685	9.99	63469	13.27	42184	15.85	33254	6.65
ZZZZZZ	74658	9.11	119963	9.99	63109	13.27	41351	15.85	29937	6.64
ZZZZZZ	73777	9.11	118026	9.99	63193	13.27	42056	15.85	30120	6.65
ZZZZZZ	74242	9.11	119290	9.99	63243	13.27	41881	15.85	30678	6.65
ZZZZZZ	74536	9.11	120672	9.99	63660	13.27	42456	15.85	31208	6.65
MC4100-12	74801	9.11	118856	9.99	63584	13.27	41365	15.85	31656	6.64
MC4159-1MS	74220	9.11	119483	9.99	65328	13.27	60516	15.84	32408	6.64
MC4159-1MSD	77567	9.11	121574	9.99	66881	13.27	63157	15.84	34192	6.65
ZZZZZZ	75421	9.11	119949	9.99	63881	13.27	45343	15.85	33559	6.65
ZZZZZZ	75774	9.11	121246	9.99	64425	13.27	42882	15.85	35601	6.65
ZZZZZZ	76169	9.11	117956	9.99	62426	13.27	41799	15.85	36183	6.65
ZZZZZZ	75546	9.11	119379	9.99	62178	13.27	41693	15.85	32342	6.65
ZZZZZZ	74462	9.11	118117	9.99	63317	13.27	41288	15.85	39220	6.65
ZZZZZZ	76598	9.11	120217	9.99	63539	13.27	42863	15.85	38058	6.65
ZZZZZZ	75789	9.11	121784	9.99	65846	13.27	48818	15.85	37337	6.65
ZZZZZZ	74208	9.11	119585	9.99	62438	13.27	42460	15.85	40429	6.66

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC4100-1	G111520.D	101.0	102.0	97.0
MC4100-3	G111521.D	103.0	99.0	95.0
MC4100-5	G111522.D	102.0	104.0	94.0
MC4100-7	G111523.D	100.0	103.0	93.0
MC4100-9	G111524.D	106.0	102.0	97.0
MC4100-11	G111519.D	97.0	105.0	96.0
MC4100-12	G111554.D	103.0	103.0	97.0
MSG4495-BS	G111516.D	104.0	103.0	78.0
MSG4495-BSD	G111517.D	100.0	104.0	79.0
MSG4495-MB	G111518.D	100.0	102.0	97.0
MSG4496-BS	G111542.D	100.0	102.0	79.0
MSG4496-BSD	G111543.D	100.0	105.0	79.0
MSG4496-MB	G111544.D	101.0	102.0	94.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26492-MB	BC54914.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4100-14

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	50-149%

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26501-MB	BI7552.D	1	10/08/11	SL	10/06/11	OP26501	GBI328

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9

CAS No.	Compound	Result	RL	Units	Q
	CT-ETPH (C9-C36)	ND	0.080	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	76%	50-149%

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26457-MB	YZ68169A.D	1	10/04/11	CZ	10/03/11	OP26457	GYZ6522

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4100-12

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	63%	30-150%
877-09-8	Tetrachloro-m-xylene	62%	30-150%
2051-24-3	Decachlorobiphenyl	37%	30-150%
2051-24-3	Decachlorobiphenyl	32%	30-150%

Method Blank Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26493-MB	YZ68407.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	116%	30-150%
877-09-8	Tetrachloro-m-xylene	108%	30-150%
2051-24-3	Decachlorobiphenyl	57%	30-150%
2051-24-3	Decachlorobiphenyl	57%	30-150%

Blank Spike Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26492-BS	BC54916.D	1	10/11/11	KD	10/05/11	OP26492	GBC2625

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4100-14

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.666	95	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	106%	50-149%

Blank Spike Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26501-BS	BI7554.D	1	10/08/11	SL	10/06/11	OP26501	GBI328

The QC reported here applies to the following samples: **Method:** CT-ETPH 7/06

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-ETPH (C9-C36)	0.7	0.532	76	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	82%	50-149%

Blank Spike Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26457-BS	YZ68170A.D	1	10/04/11	CZ	10/03/11	OP26457	GYZ6522

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4100-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.7	85	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.4	70	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	73%	30-150%
877-09-8	Tetrachloro-m-xylene	66%	30-150%
2051-24-3	Decachlorobiphenyl	39%	30-150%
2051-24-3	Decachlorobiphenyl	36%	30-150%

Blank Spike Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP26493-BS	YZ68408.D	1	10/13/11	CZ	10/05/11	OP26493	GYZ6537

The QC reported here applies to the following samples: **Method:** SW846 8082

MC4100-1, MC4100-3, MC4100-5, MC4100-7, MC4100-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.9	95	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.7	85	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	96%	30-150%
877-09-8	Tetrachloro-m-xylene	89%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%

Semivolatile Surrogate Recovery Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Method: CT-ETPH 7/06 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC4100-1	BI7556A.D	80.0
MC4100-3	BI7558.D	77.0
MC4100-5	BI7560.D	81.0
MC4100-7	BI7562.D	75.0
MC4100-9	BI7564.D	74.0
MC4100-14	BC54982.D	101.0
OP26492-BS	BC54916.D	106.0
OP26492-MB	BC54914.D	83.0
OP26501-BS	BI7554.D	82.0
OP26501-MB	BI7552.D	76.0

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	50-149%

(a) Recovery from GC signal #1

Semivolatile Surrogate Recovery Summary

Job Number: MC4100
Account: LEA Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Method: SW846 8082 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
MC4100-1	BK6475.D	86.0	88.0	93.0	88.0
MC4100-3	BK6476.D	96.0	96.0	83.0	78.0
MC4100-5	BK6477.D	59.0	571.0* [c]	80.0	78.0
MC4100-7	BK6478.D	106.0	107.0	106.0	99.0
MC4100-9	BK6479.D	97.0	95.0	87.0	83.0
MC4100-12	BK6351.D	75.0	74.0	72.0	75.0
OP26457-BS	YZ68170A.D	73.0	66.0	39.0	36.0
OP26457-MB	YZ68169A.D	63.0	62.0	37.0	32.0
OP26493-BS	YZ68408.D	96.0	89.0	44.0	44.0
OP26493-MB	YZ68407.D	116.0	108.0	57.0	57.0

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-150%
S2 = Decachlorobiphenyl	30-150%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to possible matrix interference.

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:					10/01/11		10/01/11
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	24	40				
Antimony	6.0	1.2	2				
Arsenic	4.0	.83	1.1	0.20	<4.0	0.0	<4.0
Barium	50	1	1	0.0	<50	-0.10	<50
Beryllium	4.0	.24	.24				
Boron	100	.51	1.8				
Cadmium	4.0	.18	.18	0.0	<4.0	0.0	<4.0
Calcium	5000	26	26				
Chromium	10	.66	.66	-0.20	<10	0.20	<10
Cobalt	50	.16	.22				
Copper	25	1.3	2.5	0.10	<25	0.70	<25
Gold	50	2.2	2.9				
Iron	100	14	14				
Lead	5.0	1.2	1.4	0.0	<5.0	-0.40	<5.0
Magnesium	5000	71	110				
Manganese	15	.15	.43				
Molybdenum	100	.22	.36				
Nickel	40	.22	.35	0.0	<40	0.0	<40
Palladium	50	2.4	3.4				
Platinum	50	6.2	15				
Potassium	5000	86	86				
Selenium	10	2.1	2.1	1.4	<10	1.5	<10
Silicon	100	2.2	18				
Silver	5.0	.76	1	0.20	<5.0	0.40	<5.0
Sodium	5000	21	41				
Strontium	10	.3	.38				
Thallium	5.0	.83	.88				
Tin	100	.45	.47				
Titanium	50	.61	1				
Tungsten	100	7.7	13				
Vanadium	10	1.2	1.5				
Zinc	20	.12	.61	0.30	<20	0.60	<20

Associated samples MP17833: MC4100-2

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.1

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			10/01/11					10/01/11	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	516	500	103.2	80-120	510	500	102.0	1.2	20
Barium	1820	2000	91.0	80-120	1780	2000	89.0	2.2	20
Beryllium	anr								
Boron									
Cadmium	508	500	101.6	80-120	500	500	100.0	1.6	20
Calcium	anr								
Chromium	502	500	100.4	80-120	491	500	98.2	2.2	20
Cobalt									
Copper	526	500	105.2	80-120	528	500	105.6	0.4	20
Gold									
Iron	anr								
Lead	1000	1000	100.0	80-120	990	1000	99.0	1.0	20
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	507	500	101.4	80-120	502	500	100.4	1.0	20
Palladium									
Platinum									
Potassium									
Selenium	511	500	102.2	80-120	510	500	102.0	0.2	20
Silicon	anr								
Silver	215	200	107.5	80-120	215	200	107.5	0.0	20
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	495	500	99.0	80-120	485	500	97.0	2.0	20

Associated samples MP17833: MC4100-2

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.2

7

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/01/11

Metal	MC4076-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	1.40	0.00	100.0(a)	0-10
Barium	107	103	3.4	0-10
Beryllium	anr			
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Gold				
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	0.700	1.70	142.9(a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon	anr			
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium	anr			
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	8.70	29.4	237.9(b)	0-10

Associated samples MP17833: MC4100-2

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17833 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial Dilution RPD acceptable due to low duplicate and sample concentrations.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/01/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	24	40		
Antimony	6.0	1.2	2		
Arsenic	4.0	.83	1.1	0.70	<4.0
Barium	50	1	1	1.1	<50
Beryllium	4.0	.24	.24		
Boron	100	.51	1.8		
Cadmium	4.0	.18	.18	-0.10	<4.0
Calcium	5000	26	26		
Chromium	10	.66	.66	-0.20	<10
Cobalt	50	.16	.22		
Copper	25	1.3	2.5	0.50	<25
Gold	50	2.2	2.9		
Iron	100	14	14		
Lead	5.0	1.2	1.4	-0.10	<5.0
Magnesium	5000	71	110		
Manganese	15	.15	.43		
Molybdenum	100	.22	.36		
Nickel	40	.22	.35	-0.10	<40
Palladium	50	2.4	3.4		
Platinum	50	6.2	15		
Potassium	5000	86	86		
Selenium	10	2.1	2.1	1.4	<10
Silicon	100	2.2	18		
Silver	5.0	.76	1	-0.10	<5.0
Sodium	5000	21	41		
Strontium	10	.3	.38		
Thallium	5.0	.83	.88		
Tin	100	.45	.47		
Titanium	50	.61	1		
Tungsten	100	7.7	13		
Vanadium	10	1.2	1.5		
Zinc	20	.12	.61	0.90	<20

Associated samples MP17834: MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/01/11

Metal	MC4100-4 Original	MS	Spikelot MPICP	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	0.0	516	500	103.2	75-125
Barium	281	2190	2000	95.5	75-125
Beryllium	anr				
Boron					
Cadmium	0.40	513	500	102.5	75-125
Calcium					
Chromium	2.0	489	500	97.4	75-125
Cobalt					
Copper	10.3	511	500	100.1	75-125
Gold					
Iron	anr				
Lead	0.0	990	1000	99.0	75-125
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	24.5	518	500	98.7	75-125
Palladium					
Platinum					
Potassium					
Selenium	0.0	520	500	104.0	75-125
Silicon					
Silver	0.0	205	200	102.5	75-125
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	9.0	502	500	98.6	75-125

Associated samples MP17834: MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/01/11

Metal	MC4100-4 Original	MSD	Spikelot MPICP	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	0.0	514	500	102.8	0.4	20
Barium	281	2250	2000	98.5	2.7	20
Beryllium	anr					
Boron						
Cadmium	0.40	514	500	102.7	0.2	20
Calcium						
Chromium	2.0	497	500	99.0	1.6	20
Cobalt						
Copper	10.3	515	500	100.9	0.8	20
Gold						
Iron	anr					
Lead	0.0	991	1000	99.1	0.1	20
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	24.5	518	500	98.7	0.0	20
Palladium						
Platinum						
Potassium						
Selenium	0.0	518	500	103.6	0.4	20
Silicon						
Silver	0.0	208	200	104.0	1.5	20
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	9.0	497	500	97.6	1.0	20

Associated samples MP17834: MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:			10/01/11					10/01/11	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	506	500	101.2	80-120	503	500	100.6	0.6	20
Barium	1890	2000	94.5	80-120	1870	2000	93.5	1.1	20
Beryllium	anr								
Boron									
Cadmium	500	500	100.0	80-120	499	500	99.8	0.2	20
Calcium									
Chromium	527	500	105.4	80-120	492	500	98.4	6.9	20
Cobalt									
Copper	530	500	106.0	80-120	495	500	99.0	6.8	20
Gold									
Iron	anr								
Lead	997	1000	99.7	80-120	989	1000	98.9	0.8	20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	497	500	99.4	80-120	495	500	99.0	0.4	20
Palladium									
Platinum									
Potassium									
Selenium	511	500	102.2	80-120	502	500	100.4	1.8	20
Silicon									
Silver	213	200	106.5	80-120	201	200	100.5	5.8	20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	487	500	97.4	80-120	486	500	97.2	0.2	20

Associated samples MP17834: MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834 | Methods: SW846 6010C
Matrix Type: AQUEOUS | Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/01/11

Metal	MC4100-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	281	275	2.2	0-10
Beryllium	anr			
Boron				
Cadmium	0.400	0.00	100.0(a)	0-10
Calcium				
Chromium	2.00	0.00	100.0(a)	0-10
Cobalt				
Copper	10.3	11.9	15.5 (a)	0-10
Gold				
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	24.5	24.7	0.8	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	9.00	15.0	66.7 (b)	0-10

Associated samples MP17834: MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17834 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial Dilution RPD acceptable due to low duplicate and sample concentrations.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17888 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/07/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.018	.029	0.0050	<0.20

Associated samples MP17888: MC4100-2, MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.3.1

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

QC Batch ID: MP17888
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/07/11 10/07/11

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.1	3	103.3	80-120	3.0	3	100.0	3.3	20

Associated samples MP17888: MC4100-2, MC4100-4, MC4100-6, MC4100-8, MC4100-10, MC4100-13

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

New England ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN36351	0.010	0.0	mg/l	.1	0.10	100.0	85-115%

Associated Samples:
Batch GN36351: MC4100-5
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chromium, Hexavalent	GN36351	mg/l	.1	0.10	0.0	20%

Associated Samples:
Batch GN36351: MC4100-5
(*) Outside of QC limits

8.2
8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GN36351	MC4100-5	mg/l	0.0060	0.0043	33.0(a)	0-20%

Associated Samples:
Batch GN36351: MC4100-5
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: MC4100
Account: LEA - Loureiro Eng. Associates
Project: UTC:P&W Willow Pond Quarterly GW Monitoring

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN36351	MC4100-5	mg/l	0.0060	.1	0.10	94.0	85-115%

Associated Samples:
Batch GN36351: MC4100-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

8.4
8

Appendix C

Quality Assurance/Quality Control Documentation

APPENDIX C

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND EVALUATION

1. QUALITY ASSURANCE /QUALITY CONTROL SUMMARY

During the course of the 2011 Post-Remediation Groundwater Monitoring activities, analytical and observational data were obtained for the Willow Brook and Willow Brook Pond Remediation Area (hereinafter referred to as the "Project Area"). These data included analytical data for groundwater samples, field activities documentation, sample tracking documentation, and other documentation associated with sample collection and analysis.

During the course of groundwater monitoring activities, the need to maintain accurate and complete documentation was a paramount concern. Included in this document is a description of the activities undertaken to document, manage, verify, organize, and present the data compiled; a discussion of the types and quantities of Quality Assurance/Quality Control (QA/QC) samples that were collected during field activities; and an evaluation of the analytical data generated as a result of laboratory QA/QC procedures. The evaluation of laboratory QA/QC information includes a Data Quality Assessment (DQA) and a Data Usability Evaluation (DUE) that was performed in accordance with the methodology described in the November 2007 guidance document entitled, *Reasonable Confidence Protocols* and presented in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document* published by the Connecticut Department of Environmental Protection (CT DEP).

2. DATA MANAGEMENT PROCEDURES

This section has been organized to present those activities performed by personnel to document the record of post-remediation groundwater monitoring activities performed in the field and discuss the QA/QC activities performed in the field. These discussions are followed by a description of the activities undertaken by personnel in the office to ensure the necessary data have been accumulated, that the data have been properly managed, tracked, verified, entered into the database repository, presented appropriately, and at the conclusion of monitoring events, filed for future use.

2.1 Standard Operating Procedures

Prior to conducting groundwater monitoring activities for the Project Area, Standard Operating Procedures (SOPs) had been developed by Loureiro Engineering Associates, Inc. (LEA) for the most common procedures associated with the sampling and analysis of various media for environmental investigations. Development of these SOPs has taken into account the need for precision, accuracy, completeness, representativeness, and comparability of data.

Although it is understood that there are limits on data accuracy and precision that are inherent in the collection and analysis of samples and in the operation of measuring devices, adherence to standard procedures increases consistency and the level of confidence with which the data collected are evaluated. Data collected under standard procedures can also be used more reliably in comparing results over time on a given project or from other projects or published information.

Data evaluation is also dependent upon the representativeness of the samples or measurements collected and the completeness of information associated with collection of the data. Collection and measurement techniques identified in the SOPs have been designed to take these factors into account, thus increasing the level of confidence that can be placed in the data.

Although adherence to SOPs is imperative for the successful completion of any project, there will be instances where exceptions to the SOPs must be made to obtain reliable data. When exceptions are made, documentation of both the situation requiring deviation and the actual deviation in procedure was recorded in the field documentation.

Each SOP was developed by LEA personnel experienced in the performance of the specific activity. At least two senior-level people, one being the Director of Quality, reviewed the SOP to ensure that the identified procedures satisfy the stated objectives and that the prescribed procedures are technically correct, appropriately applied, and in conformance with applicable regulatory criteria and standard practices. These individuals signified their approval by signing and dating the SOP.

SOPs for the following activities have been included as Attachment C-1 of this document.

- Low Flow Sampling;
- Liquid Sample Collection and Field Analysis; and
- Quality Assurance/Quality Control Measures for Field Activities.

2.2 Field Quality Assurance Procedures

Field QA/QC procedures begin with the use and maintenance of field equipment and instrumentation and include the proper calibration of the equipment.

2.2.1 Use and Maintenance of Field Equipment and Instrumentation

Field equipment and instruments were operated and maintained in a manner that is consistent with the manufacturer's recommended practices. Deviations from standard use of the equipment or required repairs or adaptations made in the field were noted in the Field Record and/or field logbook. Operation and maintenance manuals for equipment were kept in a single location that was known and accessible to personnel that would be likely to use the equipment.

Field personnel either returned equipment in a condition that permitted its optimal use on the following day of field operations, or notified the appropriate personnel so that repairs/replacements could be arranged in an expedient fashion. The use of expendable equipment was recorded and reported to appropriate personnel so replacements could be ordered in a timely manner and an adequate supply was available.

Prior to starting a particular field investigation, the field services manager or designated personnel ensured that adequate supplies and equipment were available for project completion.

It was the responsibility of field personnel to inform the field services manager or other authorized personnel that supplies were depleted and that re-ordering was necessary.

2.2.2 Calibration Procedures and Frequency

Instruments and equipment were calibrated with sufficient frequency and in such a manner that accuracy and reproducibility of results were consistent with the appropriate manufacturer's specifications or project-specific requirements. Calibration was performed at intervals recommended by the manufacturer or more frequently, as conditions dictate. The field instruments that required calibration during the groundwater monitoring activities were the photoionization detector (PID); the pH, dissolved oxygen, and specific conductance sensors of the flow-through cells; and the turbidity meters. Documentation of the calibration that was performed was recorded on field documentation forms, analytical records, or other appropriate daily record of activities.

2.2.3 Decontamination

Decontamination procedures are described in applicable SOPs presented in Attachment C-1. These procedures were designed to avoid cross-contamination between samples, the transport of contaminated material between onsite locations, and the transport of contaminated material from onsite or off-site locations. As described in Section 3.2 of this appendix, equipment blank samples were collected to confirm the efficiency of decontamination procedures during groundwater sampling activities.

2.3 Sample Tracking

Sample tracking activities focus on the timely assignment and tracking of information relevant to field samples collected during the groundwater sampling activities. Samples collected during the groundwater sampling activities were designated using the procedures discussed below.

Field sample tracking included the following tasks:

- Assignment of sample identification numbers and other sample identifiers to new samples to be taken, and entry to a tracking system;
- Production of sample bottle labels from the tracking system;

- Completion of chain-of-custody forms, and entry of this information to the tracking system;
- Entry of additional tracking dates to the tracking system;
- QA checking of the sample tracking information, and processing of change requests; and,
- Production of tracking reports and summary sheets, with distribution to appropriate project staff.

A computer-based sample-tracking system, based on a dBase® database computer program, was used for sample tracking.

2.3.1 Sample Location Identification

Samples were designated with location identifiers previously assigned using the procedure described in the SOPs included in Attachment C-1. In general, sample identification information included the sample type (e.g. monitoring well.); and the sample point number.

Monitoring wells have been provided with location identifiers using a systematic method to prevent duplication of location identifiers. Additionally, a two letter prefix identifying the project area (in this case "WT") was also included in the location identifiers. For example, monitoring well number 40 is designated as WT-MW-40.

The system of location identifiers provides a relatively easy means of finding the referenced locations on site drawings.

2.3.2 Sample Labeling and Custody

Prior to sample collection, project-specific sample numbers were obtained, and labels were generated with all required information, as noted in the sample collection SOPs. Each sample was labeled using waterproof ink on a computer-generated label, and sealed immediately after collection. At a minimum, each sample label contained the following information:

- Project number;
- Date;
- Sample number; and
- Time of sample collection.

In order to ensure accurate identification of all sample containers, sample labels and tags were firmly affixed to the sample container. The sampler was responsible for ensuring that the sample container was dry enough for the label to remain securely attached, or used a suitable transparent adhesive tape when the adhesive labels were not applicable or there was any question as to whether the gummed label would be secure.

All sampling information was recorded on the field sampling records. Written chain-of-custody procedures were followed whenever samples were collected, transferred, stored, analyzed, or destroyed. The objective of these procedures was to create an accurate written record that could be used to trace the possession and handling of the samples from the point of collection through analysis. A sample was determined to be in someone's "custody" under any of the following conditions:

- It was in one's actual possession;
- It was in one's view, after being in one's physical possession;
- It was placed and kept in a locked location after being in one's physical possession; and
- It was kept in a secured area that is restricted to authorized personnel only.

Each time sample custody changed hands, the chain-of-custody form indicated that change. All efforts were made to limit the number of people involved in the collection and handling of samples. The field sampler was responsible for the care and custody of the samples collected until they were transferred under the appropriate chain-of-custody procedures. Specific chain-of-custody procedures are described in the LEA SOP for *Quality Assurance/Quality Control Measures for Field Activities* included in Attachment C-1 of this document.

2.3.3 Field Documentation

Daily Field Reports and other project information tracking forms were used to record general field data collection activities or pertinent field observation or occurrences. These forms consist of the loose-leaf field documentation forms completed daily by field crews. Entries were made in waterproof ink and each page was consecutively numbered for each sampling day. Each daily entry included the following information:

- Name of person recording information;
- Names of all field personnel;
- Project name and number;
- Date;
- Start and end times;
- Weather conditions;
- Equipment used;
- Samples collected;
- Field parameters measured; and,
- Equipment calibration performed.

Other information that was recorded in the field logs included the level of personal protective equipment used, difficulties, accidents, incidents, equipment problems or malfunctions, or deviations from proposed scope of work.

Any corrections made in the field logs were crossed out, not erased, and initialed by the person making the correction. Each page of the logs was signed by the person responsible for recording information on that day. All lines on a page, and all pages, were used or crossed out and initialed.

This information was transmitted from field to office personnel at the end of each working day, or as soon thereafter as possible, for input into LEA's Information Management System (IMS). The Daily Field Reports and forms, in turn, were placed in the central project file.

2.3.4 Mapping

The location of each monitoring well was previously surveyed by a State of Connecticut licensed surveyor. All of the information used to locate sampling points within the Project Area was transferred to AutoCAD® drawings that served as the base maps for data presentation in this report.

2.4 Field Sampling Quality Assurance

QA samples were collected in general accordance with the LEA SOP for *QA/QC Measures for Field Activities*, included in Attachment C-1 of this document. The purpose of the QA samples is to confirm the reliability and validity of the field data gathered during the course of the groundwater monitoring activities. Field duplicate samples were used to provide a measurement of the consistency of samples collected from the same monitoring well and an estimate of variance and bias. Trip blank samples and equipment blank samples were used to provide a measurement of cross-contamination sources and decontamination efficiency, respectively, for groundwater sampling. Performance Evaluation (PE) samples were used to assess the overall accuracy and bias of the analytical methods being used and provide an indication of overall laboratory performance. Section 3 provides a discussion of the QA/QC sampling results.

2.5 Sample Shipping

Following sample collection, the filled sample containers were placed in coolers and packed appropriately to avoid bottle breakage. Either freezer packs or ice packed in re-sealable plastic bags or plastic containers were placed in the coolers to keep the samples at a temperature less than or equal to 4° Celsius during transport. At the end of each sampling day, samples were picked up by the analytical laboratory's courier service or brought back to LEA's Plainville, Connecticut, office and placed into LEA's External Laboratory Refrigerator for pick up the next day by the analytical laboratory's courier service.

2.5.1 Samples Submitted for Laboratory Analysis

Groundwater samples collected and submitted to the laboratory for analysis were appropriately labeled and logged on chain-of-custody forms. Copies of completed chain-of-custody records for samples submitted for analysis or archiving were submitted to the Project Manager at the end of each working day or as soon thereafter as possible.

2.5.2 Laboratory Analytical Results

The analytical results provided by the laboratory were provided in electronic data deliverable (EDD) format as well as .pdf format to the Project Manager. After documentation of receipt of the results, the EDD was entered into the electronic database by the Database Manager.

2.6 Database Management

The electronic analytical database was maintained in the LEA IMS in a dBASE® format. The database management functions are described in the following paragraphs.

2.6.1 Database Administration

Database administration included coordination of data entry and verification and review of data for completeness and correctness. The Database Manager interfaced with the Project Manager and field personnel to ensure that the database met the project objectives.

2.6.2 Electronic Data Entry

The EDD files provided by the analytical laboratory were uploaded to the electronic analytical database by the Database Manager. Data received from the laboratory in electronic format were checked for completeness by comparing data received with data analyses requested in the chain-of-custody forms. Analytical data were verified to assure the accuracy of the EDD, as compared to the analytical laboratory reports. Data verification involved having a qualified person other than the Database Manager manually check a printout from the electronic database against the laboratory reports. Any deviations from the laboratory reports were reported to the Database Manager, and the subsequent changes re-checked to verify their accuracy. In addition, the sample identification number, location, constituent, and qualifier codes were also verified.

2.6.3 Archiving of Electronic Data

Archiving of the electronic project database was routinely accomplished. Data were backed up on a no-less-than weekly basis. The permanent archive for the analytical and geological/hydrological data is both electronic and hard copy files maintained by LEA.

2.6.4 Data Verification

The field personnel performed an initial review of data obtained from field measurements. This review consisted of checking procedures utilized in the field, ensuring that field measurement instruments were properly calibrated, verifying the accuracy of transcriptions, and comparing data obtained in the field to historic measurements. Field records were subsequently reviewed following completion of each day's field activities for completeness and consistency.

An internal review of analytical data was the responsibility of laboratory personnel. The analyst initiated the data review process by examining and accepting the data. The data reviewer then reviewed the completed data package. The data reviewer provided a technical review for accuracy and precision according to the methods employed and laboratory protocols. The data package was also reviewed for completeness (i.e., all pertinent information is included, all appropriate forms are signed and dated, calculations are correct, and holding times and quality control sample acceptance criteria have been met). A final review of the data was provided by the Project Manager to ensure that the data package met the project specifications.

2.7 Data Presentation

The objective of data presentation was to illustrate the analytical data for the Project Area in formats that facilitated data interpretation and visualization. These formats include tables, figures, and drawings, as appropriate.

2.7.1 Analytical Data Presentation

Use of the electronic database for storage and retrieval of a wide range of both sample collection and analytical information maximized the ease and accuracy of data review and presentation. Tables of analytical and sampling information were produced in multiple formats to assist in the data evaluation process. Examples of analytical data presentations incorporated in this report include: tabular listings of analyses conducted, sorted by location and sample identification number, and summaries of exceedances of tabulated numeric criteria in the CT DEP's Remediation Standard Regulations (RSRs).

2.7.2 Facility Drawings

Facility drawings were created using AutoCAD® software. Base maps were generated using available information provided by Pratt & Whitney.

2.8 File Organization

Files of original analytical data obtained during the groundwater monitoring events were maintained throughout data evaluation process and ultimately archived in a central file. Incoming data were logged into the project file both on the project analytical database and on

hardcopy and then were appropriately placed in the file. Analytical results from the laboratories were keyed electronically to the sample identification numbers assigned during sample collection. Original field documentation forms, paper copies of laboratory reports, and other project files information were transferred from the project file to a designated archive location upon the completion of the project. Computerized data were stored in both hard copy and electronic back-up formats.

3. QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

QA/QC samples collected during the 2011 Post-Remediation Groundwater Monitoring Program included: duplicate groundwater samples; equipment blank samples; trip blank samples; and PE samples. The duplicate samples, equipment blanks, and PE samples were analyzed for the same suite of constituents as the field samples, and trip blanks were analyzed for volatile organic compounds (VOCs) only.

3.1 Field Duplicate Samples

Field duplicate samples were collected to provide a measure of the reproducibility of field sampling and laboratory analytical methodologies. Duplicate samples were coded in a fashion that did not alert the laboratory to the fact that the samples are replicates. Consistency between analytical results for field duplicate samples indicates consistent field sampling, sample handling, and analytical laboratory procedures. The consistency between field duplicate pairs is often measured by calculating the relative percent difference (RPD) for detects in a field duplicate pair when a compound was reported at greater than two times the sample quantitation limit in both samples. Field duplicate precision were met when the RPD was less than or equal to 30 percent for aqueous samples (which is based upon the United States Environmental Protection Agency (EPA) Region I Tier II Validation Guidance). If the RPD exceeded the acceptable limit, the affected compound(s) results were considered to be estimated values (no directional bias) and data usability was evaluated based on the project objectives. The RPD is calculated using the following formula:

$$RPD = \frac{|X_1 - X_2|}{(X_1 + X_2)/2} \times 100\%$$

where X_1 and X_2 represent the two reported concentration measurements.

One duplicate groundwater sample was collected during each monitoring event and was submitted for analysis for VOCs, extractable total petroleum hydrocarbons (ETPH), polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) 8 metals, copper, nickel and zinc. Field duplicates were submitted at a frequency of approximately one per fifteen samples, which met the QA/QC frequency objective of one field duplicate per twenty samples. A summary of field duplicate data for groundwater samples is presented in Table C-1,

and a summary of constituents analyzed in duplicate groundwater samples with calculated RPDs is presented in Table C-2.

3.1.1 Volatile Organic Compounds

There were 30 instances in which compounds were reported at concentrations greater than two times the reporting limit. The RPDs for these sample pairs ranged from 0% to 36.3%. Only two of the duplicate pairs exceeded the RPD of 30%, indicating that 94% of the RPDs met the acceptance criterion.

3.1.2 Extractable Total Petroleum Hydrocarbons

There were two instances in which compounds were reported at concentrations greater than two times the reporting limit. The RPDs for these sample pairs were 1.9% and 6.52% thus indicating that 100% of the RPDs met the acceptance criterion.

3.1.3 Polychlorinated Biphenyls

PCBs were not detected in any duplicate groundwater sample collected. Therefore, a RPD assessment could not be performed.

3.1.4 Metals

There were two instances in which metals were reported at concentrations greater than two times the reporting limit. The RPDs for these sample pairs were 2.0% and 2.2% thus indicating that 100% of the RPDs met the acceptance criterion.

3.2 Equipment Blank Samples

Equipment blank samples are used to indicate if any cross-contamination of samples between uses of sampling equipment or contamination to samples from disposable equipment may have occurred. Field equipment blank samples are collected by pouring laboratory-provided water (analyte-free, de-ionized) through and/or over decontaminated or disposable sampling equipment into appropriate containers. The criteria for evaluating equipment blanks were such that no target compound should be present at or above the sample quantitation limit in any given equipment blank.

One equipment blank sample was collected during each monitoring event and submitted to the laboratory for analysis for VOCs, ETPH, PCBs, and metals. A summary of all equipment blank samples analyzed is provided as Table C-3. ETPH was reported at a concentration of 0.0975 milligrams per liter (mg/l) in the equipment blank sample analyzed on September 28, 2011. ETPH was reported above laboratory detection limits in five samples collected on September 28, 2011 from monitoring well WT-MW-19I, WT-MW-40, WT-MW-44, WT-MW-50 and its duplicate sample, at concentrations less than 0.4875 mg/l, which is five times the concentration reported in the equipment blank sample. Consequently, the ETPH concentrations reported in these groundwater samples may be associated with equipment blank contamination. No additional constituents were detected in any of the equipment blank samples collected in 2011.

3.3 Trip Blank Samples

Trip blank samples are used to indicate if any cross-contamination between samples or contamination from other sources of VOCs may have occurred during transport, storage, or laboratory analysis of samples. Trip blank samples were prepared by Accutest Laboratories (Accutest) using ultra-pure, de-ionized water and submitted to the sampling team whenever glassware was delivered. A trip blank sample accompanied all project VOC sample containers through all custody changes in possession, coolers and refrigerators. The trip blank samples were never opened by the sampling team.

A total of five trip blank samples, one for each day that sampling was conducted, were submitted to Accutest for analysis. A summary of all trip blank samples is included in Table C-3. No constituents were detected above laboratory reporting limits in any of the trip blank samples that were collected in 2011.

3.4 Performance Evaluation Samples

Double blind aqueous PE samples were submitted to Accutest during the September 2011 monitoring event. The PE sample data were used to assess the overall accuracy and bias of the analytical methods being used and provide an indication of overall laboratory performance. Data for the PE samples also provided information about the magnitude and direction of quantitative bias for the laboratory methods, including sample preparation (extraction and cleanup) and analysis (chromatography and calibration).

APPENDIX C

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND EVALUATION

The PE samples for this project were prepared by Environmental Resource Associates (ERA) of Arvada, Colorado. All results for PE samples were compared with vendor-certified acceptance limits. The PE samples results were evaluated for pass and fail. Fails were categorized as bias high, bias low, false negatives and false positives. Performance evaluation sample certified values and results of the performance sample evaluation are included as Attachment C-2. The following is a summary of the performance evaluation samples results by analytical class.

- **Volatile Organic Compounds**: An evaluation of the results obtained against vendor-specified acceptance standards indicated that each of the VOC constituents (tetrachloroethylene, trichloroethylene (TCE), vinyl chloride, cis-1,2-dichloroethylene and trans-1,2-dichloroethylene) was within the acceptable vendor-certified limits..

- **Polychlorinated Biphenyls:** PCBs were reported by the laboratory within the vendor-certified limits.

- **Extractable Total Hydrocarbons:** ETPH were reported by the laboratory within the vendor-certified limits.

- **Metals:** All metals were reported by the laboratory within the vendor-certified acceptable limits.

4. ASSESSMENT OF LABORATORY QA/QC INFORMATION

All data were analyzed using the Connecticut Reasonable Confidence Protocols (RCPs), which are analytical methods based on the respective EPA methods. The RCPs provide specific requirements for QA/QC that the laboratory must follow during analysis of environmental samples. In addition, the RCP methods require the laboratory to report the QA/QC analytical data associated with the analysis of each sample in the laboratory report and further require that the laboratory provide a narrative of any non-conformances for QA/QC data the were outside the acceptable limits for such data, as described in the specific RCP method.

QA/QC information provided by laboratories was evaluated with respect to quality by conducting a DQA and DUE in accordance with the methodology described in the November 2007 guidance document entitled *Reasonable Confidence Protocols* and in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document*. The DQA process is intended to assess the quality of the analytical data generated by the laboratories. The DUE is performed to determine, once the quality of the analytical is known, whether the quality of that data will affect its usability for the intended purpose.

4.1 Data Quality Assessment and Usability

The DQA was performed to assess the quality of the analytical data in each laboratory analytical report package. The DQA resulted in identifying data for which the quality could affect its potential use in decision-making. The DUE, which took into account the objectives for the data collection effort, and the intended use of the data, was performed using the information developed during the DQA. The RCP Data Quality Assessment Summary Reports that were generated during that assessment process are included as Attachment C-3.

Each analytical data package was reviewed in accordance with the DQA review process. Several deficiencies were noted. These included:

- Results for the surrogate recoveries for PCBs outside the accepted ranged for variability;
- Results for Laboratory Control Sample (LCS) for VOCs outside the accepted range of variability;

- Recoveries for Matrix Spike/Matrix Spike Duplicate (MS/MSD) for VOCs outside the accepted range of variability;
- Recoveries for initial calibration curve and continuing calibration curve outside the accepted range of variability for specific VOC constituents; and
- pH was greater than 2 units for sample preservation for VOCs.

After the laboratory analytical data were evaluated during the DQA, a DUE was performed. The DUE took into account the following:

- the site-specific conceptual site model (CSM);
- knowledge of the contaminant types, concentrations, and distribution;
- objectives for the data collection effort and the intended use of the data (i.e. the data quality objectives (DQOs)); and
- results from field QA/QC sampling.

In general, the QA/QC deficiencies identified related to constituents that are not identified as constituents of concern for the Project Area or resulted in bias high data. Taking into consideration multiple lines of evidence, results from the DUE indicated that the data generated during the 2011 groundwater sampling events were usable for the intended purpose. Four deficiencies associated with constituent of concerns required a more detailed evaluation to assess potential affects on usability.

For two VOC samples the pH level associated with the sample preservation method was high, resulting in a potential low bias for aromatic VOCs. In one of the affected samples, aromatic VOCs are not typically detected. In the other sample, benzene was detected at a concentration that is consistent with previous concentrations reported for unbiased data. Therefore, these deficiencies did not affect the usability of the data.

The MS/MSD recoveries for cis-1,2-dichloroethylene associated with groundwater collected from monitoring well WT-MW-58 in September 2011, were very low (4% and 14%, respectively), which indicates a low bias. However, the cis-1,2-dichloroethylene concentration reported (542 micrograms per liter [µg/l]) in the affected groundwater sample was consistent with previous concentrations reported in this monitoring well. The MS/MSD recoveries for TCE associated with groundwater collected from monitoring well WT-MW-50 in September 2011,

were also below acceptable limits (64% and 59%, respectively). TCE was reported at a concentration of 268 µg/l in the affected groundwater sample. TCE was also detected in a duplicate groundwater sample collected from monitoring well WT-MW-50, for which no QC issues resulting in a directional bias were identified, at a concentration of 387 µg/l. It appears that the low MS/MSD recoveries may have resulted in the reporting of a lower TCE result in the affected sample. However, the higher TCE detection reported in the duplicate groundwater sample was evaluated for decision making purposes. In both instances, these deficiencies did not affect the usability of the data.

The rationale discussed in the foregoing statement, coupled with the number and type of QA/QC issues identified during the DQA, provide support for a conclusion that analytical results for the samples collected during the four 2011 monitoring events were considered usable for decision-making purposes.

TABLES

Table C-1
SUMMARY OF DUPLICATE SAMPLING AND ANALYTICAL INFORMATION
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

Sample Information					Analysis Information							
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
WT-MW-50	1167446	03/22/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1167451	03/22/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1230738	06/21/2011	16.00 - 26.00	GWS		X					x	
WT-MW-50	1230747	06/21/2011	16.00 - 26.00	GWS		X						
WT-MW-50	1241016	09/28/2011	16.00 - 26.00	GWS		X			x	X	X	
WT-MW-50	1241030	09/28/2011	16.00 - 26.00	GWS		X			x	X	X	

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Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.	WT-MW-50	WT-MW-50	RPD (%)
	Sample ID	1167446	1167451			1230738	1230747	
	Sample Date	03/22/2011	03/22/2011			06/21/2011	06/21/2011	
	Sample Time	11:50	11:50			13:30	13:30	
	Sample Depth	16.00' - 26.0	16.00' - 26.0			16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM			ACTM	ACTM	
	Lab. Number	M98677-10	M98677-16			MC1274-5	MC1274-21	
Constituent	Units							
Xylenes,m- & p-	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Date PCBs Analyzed	-	03/31/2011	03/31/2011					
Date Metals Analyzed	-	03/29/2011	03/29/2011			06/21/2011		
Date Organics Analyzed	-	04/02/2011	04/02/2011			06/26/2011	06/26/2011	
Date Physical Analyzed	-	03/29/2011	03/29/2011					
Arsenic (unfiltered)	mg/L	0.0068	0.0058	15.9				
Barium (unfiltered)	mg/L	0.253	0.258	2.0				
Cadmium (unfiltered)	mg/L	<0.0040 U	<0.0040 U					
Chromium, Total (unfiltered)	mg/L	<0.01 U	<0.01 U					
Chromium, Hexavalent (unfiltered)	mg/L	<0.010 U	<0.010 U			<0.010 U		
Copper (unfiltered)	mg/L	<0.025 U	<0.025 U					
Lead (unfiltered)	mg/L	<0.0050 U	<0.0050 U					
Mercury (unfiltered)	mg/L	<0.00020 U	<0.00020 U					
Nickel (unfiltered)	mg/L	0.0592	0.0601	1.5				
Selenium (unfiltered)	mg/L	<0.01 U	<0.01 U					
Silver (unfiltered)	mg/L	<0.0050 U	<0.0050 U					
Zinc (unfiltered)	mg/L	0.0211	0.0246	15.3				
Arochlor 1016	ug/L	<0.42 U	<0.33 U					
Arochlor 1221	ug/L	<0.42 U	<0.33 U					
Arochlor 1232	ug/L	<0.42 U	<0.33 U					
Arochlor 1242	ug/L	<0.42 U	<0.33 U					
Arochlor 1248	ug/L	<0.42 U	<0.33 U					
Arochlor 1254	ug/L	<0.42 U	<0.33 U					
Arochlor 1260	ug/L	<0.42 U	<0.33 U					
Arochlor 1262	ug/L	<0.42 U	<0.33 U					
Arochlor 1268	ug/L	<0.42 U	<0.33 U					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.445	0.475	6.52				
Naphthalene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.	WT-MW-50	WT-MW-50	RPD (%)
	Sample ID	1167446	1167451			1230738	1230747	
	Sample Date	03/22/2011	03/22/2011			06/21/2011	06/21/2011	
	Sample Time	11:50	11:50			13:30	13:30	
	Sample Depth	16.00' - 26.0	16.00' - 26.0			16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM			ACTM	ACTM	
	Lab. Number	M98677-10	M98677-16			MC1274-5	MC1274-21	
Constituent	Units							
1,2-Dichloropropane	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
Acetone	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Acrylonitrile	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
2-Hexanone	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Benzene	ug/L	<0.50 U	0.52			0.60	0.54	11
1,2,3-Trichlorobenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,2,4-Trichlorobenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,2,4-Trimethylbenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
o-Dichlorobenzene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
1,3,5-Trimethylbenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
m-Dichlorobenzene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
p-Dichlorobenzene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Bromobenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Butyl Benzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Chlorobenzene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Ethylbenzene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Isopropylbenzene (Cumene)	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Propylbenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
sec-Butylbenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
tert-Butylbenzene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Hexachlorobutadiene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Methyl Ethyl ketone	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
trans-1,4-Dichlorobutene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Carbon Disulfide	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Carbon Tetrachloride	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
4-Isopropyltoluene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,1,1,2-Tetrachloroethane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,1,1-Trichloroethane	ug/L	124	130	5		14.8	16.9	13.3

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.	WT-MW-50	WT-MW-50	RPD (%)
	Sample ID	1167446	1167451			1230738	1230747	
	Sample Date	03/22/2011	03/22/2011			06/21/2011	06/21/2011	
	Sample Time	11:50	11:50			13:30	13:30	
	Sample Depth	16.00' - 26.0	16.00' - 26.0			16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM			ACTM	ACTM	
	Lab. Number	M98677-10	M98677-16			MC1274-5	MC1274-21	
Constituent	Units							
1,1,2,2-Tetrachloroethane	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
1,1,2-Trichloroethane	ug/L	1.5	1.9	24		<1.0 U	<1.0 U	
1,1,2-Trichlorotrifluoroethane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,1-Dichloroethane	ug/L	24.5	25.7	4.78		12.5	13.7	9.16
Ethylene Dibromide	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
1,2-Dichloroethane	ug/L	3.5	3.7	5.6		<1.0 U	<1.0 U	
Chloroethane	ug/L	12.0	11.3	6.0		34.5	39.6	13.8
Methyl tert-Butyl ether	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
1,1-Dichloroethylene	ug/L	349	354	1		30.3	43.2	35.10
trans-1,2-Dichloroethylene	ug/L	2.4	2.3	4.3		1.2	1.4	15
cis-1,2-Dichloroethylene	ug/L	134	145	7.9		42.6	54.8	25.05
Vinyl Chloride	ug/L	32.8	32.2	1.9		12.3	16.9	31.5
Tetrachloroethylene	ug/L	130	140	7		6.2	6.1	1.6
Tetrahydrofuran	ug/L	<10 U	<10 U			42.7	36.5	15.7
Bromomethane	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
Bromodichloromethane	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Chloromethane	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
Chlorodibromomethane	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Methylene Dibromide	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Methylene Chloride	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
Dichlorodifluoromethane	ug/L	<2.0 U	<2.0 U			<2.0 U	<2.0 U	
Bromoform	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Chloroform	ug/L	5.9	6.4	8.1		<1.0 U	<1.0 U	
Trichlorofluoromethane	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
Methyl Isobutyl ketone	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,2,3-Trichloropropane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,2-Dibromo-3-Chloropropane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,3-Dichloropropane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.	WT-MW-50	WT-MW-50	RPD (%)
	Sample ID	1167446	1167451			1230738	1230747	
	Sample Date	03/22/2011	03/22/2011			06/21/2011	06/21/2011	
	Sample Time	11:50	11:50			13:30	13:30	
	Sample Depth	16.00' - 26.0	16.00' - 26.0			16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM			ACTM	ACTM	
	Lab. Number	M98677-10	M98677-16			MC1274-5	MC1274-21	
Constituent	Units							
sec-Dichloropropane	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
1,1-Dichloropropene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
trans-1,3-Dichloropropene	ug/L	<0.50 U	<0.50 U			<0.50 U	<0.50 U	
cis-1,3-Dichloropropene	ug/L	<0.50 U	<0.50 U			<0.50 U	<0.50 U	
Styrene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Toluene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
o-Chlorotoluene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
p-Chlorotoluene	ug/L	<5.0 U	<5.0 U			<5.0 U	<5.0 U	
Trichloroethylene	ug/L	665	658	1		63.8	110	50
o-Xylene	ug/L	<1.0 U	<1.0 U			<1.0 U	<1.0 U	
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Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.			
	Sample ID	1241016	1241030					
	Sample Date	09/28/2011	09/28/2011					
	Sample Time	12:45	12:45					
	Sample Depth	16.00' - 26.0	16.00' - 26.0					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4052-12	MC4052-16					
Constituent	Units							
Xylenes,m- & p-	ug/L	<1.0 U	<1.0 U					
Date PCBs Analyzed	-	10/12/2011	10/12/2011					
Date Metals Analyzed	-	10/01/2011	10/01/2011					
Date Organics Analyzed	-	10/07/2011	10/07/2011					
Date Physical Analyzed	-	10/11/2011	10/11/2011					
Arsenic (unfiltered)	mg/L	0.0072	0.0072	0.00				
Barium (unfiltered)	mg/L	0.362	0.354	2.2				
Cadmium (unfiltered)	mg/L	<0.0040 U	<0.0040 U					
Chromium, Total (unfiltered)	mg/L	<0.01 U	<0.01 U					
Chromium, Hexavalent (unfiltered)	mg/L	<0.010 U	<0.010 U					
Copper (unfiltered)	mg/L	<0.025 U	<0.025 U					
Lead (unfiltered)	mg/L	<0.0050 U	<0.0050 U					
Mercury (unfiltered)	mg/L	<0.00020 U	<0.00020 U					
Nickel (unfiltered)	mg/L	<0.04 U	<0.04 U					
Selenium (unfiltered)	mg/L	<0.01 U	<0.01 U					
Silver (unfiltered)	mg/L	<0.0050 U	<0.0050 U					
Zinc (unfiltered)	mg/L	<0.02 U	<0.02 U					
Arochlor 1016	ug/L	<0.25 U	<0.25 U					
Arochlor 1221	ug/L	<0.25 U	<0.25 U					
Arochlor 1232	ug/L	<0.25 U	<0.25 U					
Arochlor 1242	ug/L	<0.25 U	<0.25 U					
Arochlor 1248	ug/L	<0.25 U	<0.25 U					
Arochlor 1254	ug/L	<0.25 U	<0.25 U					
Arochlor 1260	ug/L	<0.25 U	<0.25 U					
Arochlor 1262	ug/L	<0.25 U	<0.25 U					
Arochlor 1268	ug/L	<0.25 U	<0.25 U					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.365	0.372	1.9				
Naphthalene	ug/L	<5.0 U	<5.0 U					

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.			
	Sample ID	1241016	1241030					
	Sample Date	09/28/2011	09/28/2011					
	Sample Time	12:45	12:45					
	Sample Depth	16.00' - 26.0	16.00' - 26.0					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4052-12	MC4052-16					
Constituent	Units							
1,2-Dichloropropane	ug/L	<2.0 U	<2.0 U					
Acetone	ug/L	<5.0 U	<5.0 U					
Acrylonitrile	ug/L	<5.0 U	<5.0 U					
2-Hexanone	ug/L	<5.0 U	<5.0 U					
Benzene	ug/L	<0.50 U	0.50					
1,2,3-Trichlorobenzene	ug/L	<5.0 U	<5.0 U					
1,2,4-Trichlorobenzene	ug/L	<5.0 U	<5.0 U					
1,2,4-Trimethylbenzene	ug/L	<5.0 U	<5.0 U					
o-Dichlorobenzene	ug/L	<1.0 U	<1.0 U					
1,3,5-Trimethylbenzene	ug/L	<5.0 U	<5.0 U					
m-Dichlorobenzene	ug/L	<1.0 U	<1.0 U					
p-Dichlorobenzene	ug/L	<1.0 U	<1.0 U					
Bromobenzene	ug/L	<5.0 U	<5.0 U					
Butyl Benzene	ug/L	<5.0 U	<5.0 U					
Chlorobenzene	ug/L	<1.0 U	<1.0 U					
Ethylbenzene	ug/L	<1.0 U	<1.0 U					
Isopropylbenzene (Cumene)	ug/L	<5.0 U	<5.0 U					
Propylbenzene	ug/L	<5.0 U	<5.0 U					
sec-Butylbenzene	ug/L	<5.0 U	<5.0 U					
tert-Butylbenzene	ug/L	<5.0 U	<5.0 U					
Hexachlorobutadiene	ug/L	<5.0 U	<5.0 U					
Methyl Ethyl ketone	ug/L	<5.0 U	<5.0 U					
trans-1,4-Dichlorobutene	ug/L	<5.0 U	<5.0 U					
Carbon Disulfide	ug/L	<5.0 U	<5.0 U					
Carbon Tetrachloride	ug/L	<1.0 U	<1.0 U					
4-Isopropyltoluene	ug/L	<5.0 U	<5.0 U					
1,1,1,2-Tetrachloroethane	ug/L	<5.0 U	<5.0 U					
1,1,1-Trichloroethane	ug/L	84.0	80.7	4.01				

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.			
	Sample ID	1241016	1241030					
	Sample Date	09/28/2011	09/28/2011					
	Sample Time	12:45	12:45					
	Sample Depth	16.00' - 26.0	16.00' - 26.0					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4052-12	MC4052-16					
Constituent	Units							
1,1,2,2-Tetrachloroethane	ug/L	<1.0 U	<1.0 U					
1,1,2-Trichloroethane	ug/L	1.1	<1.0 U					
1,1,2-Trichlorotrifluoroethane	ug/L	<5.0 U	<5.0 U					
1,1-Dichloroethane	ug/L	18.1	18.8	3.8				
Ethylene Dibromide	ug/L	<2.0 U	<2.0 U					
1,2-Dichloroethane	ug/L	<1.0 U	2.5					
Chloroethane	ug/L	22.5	20.8	7.85				
Methyl tert-Butyl ether	ug/L	<1.0 U	<1.0 U					
1,1-Dichloroethylene	ug/L	169	162	4				
trans-1,2-Dichloroethylene	ug/L	1.9	1.7	11				
cis-1,2-Dichloroethylene	ug/L	89.7	87.2	2.83				
Vinyl Chloride	ug/L	22.2	20.0	10.4				
Tetrachloroethylene	ug/L	64.2	58.5	9.29				
Tetrahydrofuran	ug/L	25.0	25.0	0.00				
Bromomethane	ug/L	<2.0 U	<2.0 U					
Bromodichloromethane	ug/L	<1.0 U	<1.0 U					
Chloromethane	ug/L	<2.0 U	<2.0 U					
Chlorodibromomethane	ug/L	<1.0 U	<1.0 U					
Methylene Dibromide	ug/L	<5.0 U	<5.0 U					
Methylene Chloride	ug/L	<2.0 U	<2.0 U					
Dichlorodifluoromethane	ug/L	<2.0 U	<2.0 U					
Bromoform	ug/L	<1.0 U	<1.0 U					
Chloroform	ug/L	3.2	3.4	6.1				
Trichlorofluoromethane	ug/L	<1.0 U	<1.0 U					
Methyl Isobutyl ketone	ug/L	<5.0 U	<5.0 U					
1,2,3-Trichloropropane	ug/L	<5.0 U	<5.0 U					
1,2-Dibromo-3-Chloropropane	ug/L	<5.0 U	<5.0 U					
1,3-Dichloropropane	ug/L	<5.0 U	<5.0 U					

Table C-2
SUMMARY OF ANALYTICAL RESULTS - FIELD DUPLICATES
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	Location ID	WT-MW-50	WT-MW-50	RPD (%)	.			
	Sample ID	1241016	1241030					
	Sample Date	09/28/2011	09/28/2011					
	Sample Time	12:45	12:45					
	Sample Depth	16.00' - 26.0	16.00' - 26.0					
	Laboratory	ACTM	ACTM					
	Lab. Number	MC4052-12	MC4052-16					
Constituent	Units							
sec-Dichloropropane	ug/L	<5.0 U	<5.0 U					
1,1-Dichloropropene	ug/L	<5.0 U	<5.0 U					
trans-1,3-Dichloropropene	ug/L	<0.50 U	<0.50 U					
cis-1,3-Dichloropropene	ug/L	<0.50 U	<0.50 U					
Styrene	ug/L	<5.0 U	<5.0 U					
Toluene	ug/L	<1.0 U	<1.0 U					
o-Chlorotoluene	ug/L	<5.0 U	<5.0 U					
p-Chlorotoluene	ug/L	<5.0 U	<5.0 U					
Trichloroethylene	ug/L	387	268	36.3				
o-Xylene	ug/L	<1.0 U	<1.0 U					
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Table C-3
SUMMARY OF EQUIPMENT AND TRIP BLANK SAMPLING INFORMATION
Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond
2011 Annual Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

Sample Information					Analysis Information							
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
EQUIPMENT	1167449	03/22/2011		BKE		x			x	x	x	
EQUIPMENT	1230745	06/21/2011		BKE		x					x	
EQUIPMENT	1241029	09/28/2011		BKE		x			x	X	x	
TRIP BLANK	1167452	03/21/2011		BKT		x						
TRIP BLANK	1167450	03/22/2011		BKT		x						
TRIP BLANK	1230746	06/21/2011		BKT		x						
TRIP BLANK	1241028	09/28/2011		BKT		x						
TRIP BLANK	1241027	09/29/2011		BKT		x						

Printed on 12/13/2011

ATTACHMENT C-1

LEA Standard Operating Procedures

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
for
Liquid Sample Collection and Field Analysis

SOP ID: 10004
Date Initiated: 02/20/90
Revision No. 006: 12/31/01

Approved By: ***/s/ Joseph T. Trzaski*** ***12/31/01***
Joseph T. Trzaski **Date**
Senior Scientist

/s/ Nick D. Skoularikis ***12/31/01***
Nick D. Skoularikis **Date**
Director of Quality

REVISION RECORD

Rev #	Date	Additions/Deletions/Modifications
Initial Issue	2/20/90	
001-004	NR	No record.
005	01/15/99	No record.
006	12/31/01	Updated to conform to new SOP format. Minor revisions throughout.

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
for
Liquid Sample Collection and Field Analysis

1. Purpose and Scope

This document describes procedures to be followed for measurement of static water level elevations, detection of immiscible layers, well evacuation, sample withdrawal, and field analyses.

2. Definitions

2.1. Immiscible layers: The term is used to denote free-phase liquids that may be present in the aquifer as a result of a release. These liquids may have a density lighter than water (light non-aqueous phase liquids (LNAPL) or floaters) or heavier than water (dense non-aqueous phase liquids (DNAPL) or sinkers).

3. Equipment

3.1. Equipment required for the collection and field analysis of liquid samples includes:

- Water-level indicator (accurate to 0.01 foot). The size of the instrument depends on the size of the wells being monitored.
- Distilled water.
- Hand towels.
- Portable volatile organic compound (VOC) analyzer (Photovac MicroTIP®, Foxboro OVA® or equivalent).
- Interface probe, clear polyvinyl chloride (PVC) or fluorocarbon resin bailer (if required).
- pH and temperature meter (capable of accuracy to 0.1 pH unit).
- Specific conductivity meter.
- Bailers (clean or disposable) with disposable nylon or polyethylene rope.

- Polyethylene plastic sheeting.
- Polyethylene tubing, and appropriate pumping apparatus such as centrifugal pump, Wattera® pump with fluorocarbon resin foot valve, peristaltic pump with appropriate tubing, submersible pump or other appropriate pumping apparatus.
- Clean disposable gloves.
- Field paperwork.
- Sample collection jars.
- Indelible marker.
- Cooler(s) with ice or ice packs.
- Site-specific Health and Safety Plan (as applicable).
- Site-specific work plan, work instructions, drawings (as applicable).
- Personal protective equipment (as may be required by Site Specific Health and Safety Plan).
- Aluminum foil (if field decontamination is expected).
- Appropriate containers for collection of purge water (bucket, carboy, 55-gallon drum etc.).

4. Procedures

Immediately upon opening the well, the air in the wellhead should be sampled for VOCs using a portable VOC analyzer, such as a Photovac MicroTIP®. The well cap shall be opened slightly and the sampling port of the VOC analyzer shall be inserted into the well. The maximum reading shall be recorded on the appropriate field paperwork. The instrument shall be zeroed with ambient air prior to the measurement, and the initial and final readings shall be recorded for each well.

Measures shall be taken during well sampling to prevent surface soils from coming in contact with the purging equipment and lines. Typically, a polyethylene sheet is placed on the ground providing adequate coverage for the equipment being used.

4.1. Detection of Immiscible Layers

4.1.1. If the presence of immiscible layers is suspected or unknown, the sampling event shall include provisions for detection of immiscible phases prior to well evacuation or sample collection. Lighter and/or

denser immiscible phases may be encountered in a groundwater monitoring well.

4.1.2. An interface probe will be used to determine the existence of any immiscible layers, light or dense. Alternatively, a clear fluorocarbon resin or PVC bailer may be used to determine the existence of the phases or oil sheen in the well when no accurate determination of the immiscible layer thickness is required. For Geoprobe® wells smaller than 1" in diameter, an interface probe cannot be introduced into the well. A small diameter disposable bailer can be used to determine the existence of any immiscible layers. Alternatively the initial water purged from a well will be collected and evaluated visually for the presence of immiscible layers.

4.1.3. If immiscible layers were encountered, the levels of the immiscible liquids shall be measured to an accuracy of 0.02 feet using an electronic interface probe capable of detecting the interfaces between air, product, and water. The interface levels shall be recorded in the field notebook. Adjustments of the observed head to the theoretical hydraulic head shall be calculated based on the density conversion factor associated with the particular non-aqueous phase liquid.

4.1.4. If required, the immiscible layers and groundwater shall then be purged into 55-gallon 17H DOT drum, which shall be labeled and characterized for disposal. The immiscible layer shall be collected prior to any purging activities.

4.2. Measurement of Static Water Level

4.2.1. The static water elevations in each well shall be measured prior to each sampling event. This is performed initially to characterize the site, and in subsequent sampling rounds to determine whether horizontal or vertical flow gradients have changed. A change in hydrologic conditions may necessitate modification of the groundwater monitoring program.

4.2.2. Remove the protective cover and locking cap.

4.2.3. Each well shall have a surveyed reference point located at the top of the well casing with the locking cap removed. The reference point shall be easily recognizable, since the personnel conducting the sampling may differ from one sampling event to the next. If no distinguishable reference point is present, the measurements shall be

taken from the highest point on the well casing. The absence of a reference point and subsequent reference point used for the measurements shall be recorded on the field paperwork.

4.2.4. The following parameters shall be measured with an accuracy of 0.01 ft:

- Depth to standing water.
- Depth to bottom of well.

4.2.5. A water-level indicator will be used for measurement. Due to possible pressure differences between the well atmosphere and the ambient atmosphere, the water level will be allowed to equilibrate for 15 minutes following removal of the well cap. The results shall be recorded in the appropriate location(s) on the appropriate field forms.

4.2.6. Total depth measurements will be compared to original depths to determine the degree of siltation that may have occurred. This information shall be noted on the field form. Should significant siltation occur in any well, the well may need to be redeveloped by an approved method. This information will also be used to confirm that the proper well is being sampled (in case of cluster wells).

4.2.7. The portion of the tape immersed in the well shall be decontaminated during retrieval using a distilled water rinse followed by drying with a clean wipe, prior to use in another well. This decontamination procedure shall be amended, as needed, to accommodate the specific type of contamination anticipated.

4.3. Field Analysis

4.3.1. Parameters that are physically or chemically unstable shall be measured immediately after collection using a field test meter or other equipment. Parameters such as pH, temperature, specific conductivity, and turbidity will be measured in the field, at the temperature of the well sample. The measurement of additional parameters may be required dependent upon sampling methods or other site-specific conditions.

4.3.2. A combination of pH/temperature/specific conductivity meters shall be used. The meter shall be calibrated prior to use and at the end of the day using calibration solutions, in accordance with the instructions provided in the instrument's operating manual. Whenever a

questionable reading ("spike") is observed the calibration shall be checked. The calibration shall be checked prior to sampling each well or well cluster. Calibration information to be recorded in the field paperwork shall include the temperature, pH, and conductivity readings in each calibration solution before and after each calibration.

The pH/temperature/conductivity meters shall be placed into a sample and allowed to stabilize for a minimum of twenty seconds. The accuracy of measurement shall be 0.1 standard units for pH, and 0.1•• Celsius for temperature. For conductivity, the accuracy shall be as stipulated by the range of the instrument. The sample shall be discarded in an appropriate manner upon completion of the analysis.

4.3.3. The pH/temperature/specific conductivity meters shall be decontaminated using a distilled/deionized water rinse between each sample. To the extent possible, the same probe and meter shall be used for all measurements at a given site for the duration of monitoring at the site.

4.3.4. Turbidity of the sample will be measured using a DRT turbidimeter, Model 15C or equivalent, that has been calibrated in accordance with the instructions provided in the instrument's manual. The accuracy of the measurement shall be to 1 NTU (nephelometric turbidity unit).

4.4. Well Evacuation

4.4.1. Calculate standing water in the well based on the following schedule and record on the appropriate field form:

Well Diameter (inches)	Conversion Factor (gal/feet)
½	0.01
1	0.041
1 ¼	0.064
1 ½	0.091
2	0.163
4	0.654
6	1.47

4.4.2. Generally, a centrifugal, submersible, air-lift, bladder, inertial, or peristaltic pump equipped with a fluorocarbon resin or PVC foot valve on the end of dedicated tubing, as appropriate, may be used to evacuate the monitoring wells. Alternatively, evacuation of the wells may be accomplished using a bailer.

4.4.3. A new sheet of polyethylene plastic shall be placed on the ground adjacent to the well. Sampling and purging equipment, such as pump, tubing, bailers and bailer twine, containers, etc., shall be placed on the polyethylene sheet, never on the ground.

4.4.4. Don disposable gloves, prepare pump and tubing for insertion into the well, ensuring that any tubing or pump apparatus is of sufficient length to reach the appropriate depth for pumping. Pumping shall occur within the well screened interval as indicated on the well construction diagram. If the well construction information is not available, the bottom of the tubing or pump shall be placed 1' - 2' above the bottom of the well.

4.4.5. Lower the pump and/or tubing gently into the water column to the appropriate depth and begin pumping.

4.4.6. Measure pH, temperature, specific conductivity, turbidity and other specific parameters in the well from the first water extracted during the purging process.

4.4.7. Remove a volume of water equal to 3 to 5 times the standing water from the well measured into an appropriate container. Purging of the well shall occur at a slow rate to minimize agitation of the water recharging the well.

4.4.8. If it is not possible to remove three volumes as described above, due to slow recovery of the well, the well shall be emptied and allowed to recover. In slow-yielding wells, whenever full recovery exceeds two hours, the sample shall be extracted as soon as a sufficient volume is available for a sample for each parameter.

4.4.9. Measure pH, temperature, specific conductivity, turbidity and other specific parameters **prior** to sampling.

4.4.10. Well evacuation is deemed to be complete when the following criteria have been met:

- pH measurements vary no more than ± 0.5 standard units.
- Specific conductivity measurements vary no more than ± 10%.
- Temperature measurements vary no more than ± 1•€.
- Turbidity measurements (if used) are below 5 NTU, if practicable.

Alternatively well purging shall be deemed complete if a maximum of five well volumes have been removed from the well and/or other site-specific or method-specific parameters have stabilized.

4.4.11. Measure pH, temperature, specific conductivity and turbidity (and other specific parameters) again **after** sampling to determine the effectiveness of purging and sample stability.

4.4.12. Do **not** re-use purging equipment (bailers, rope, tubing, sampling vials, etc.). Any non-disposable bailers shall be returned to the office for decontamination. Pumps shall be decontaminated between monitoring wells, in accordance with procedures noted in Section 4.7.

4.4.13. Bailer twine and other consumables, such as filter apparatus, shall be disposed of appropriately.

4.4.14. Record sampler's name, sampling time, volume of water purged, parameters measured, weather conditions, sample number, analyses required and all other pertinent information on appropriate field forms, and complete the chain of custody form. The field paperwork shall also provide an indication of other field conditions that could potentially impact water levels (such as a pond being drained, or presence of a beaver dam in nearby surface water).

4.4.15. As dictated by project-specific requirements and/or groundwater quality considerations, any water purged from the monitoring wells shall be stored in properly labeled containers for disposal.

4.4.16. Storage shall be in properly labeled containers approved for storage of hazardous materials, and in an appropriate designated location at the site.

4.5. Sample Withdrawal

4.5.1. In order to ensure that the groundwater sample is representative of the formation, it is important to minimize physical alteration (i.e. agitation during purging and/or sample collection) or chemical contamination of the sample during the withdrawal process. The sample set shall include enough dedicated bailers and sample jars to obtain samples from each well, and additional quality assurance/quality control (QA/QC) samples such as duplicates, trip blanks and equipment blanks. In addition, it is recommended to increase the supply of

sampling equipment and sample jars by about 10% to account for missing or broken glassware.

4.5.2. Use either an appropriate pump or bailer to purge each well (the same pump used for purging may be used for sample withdrawal, with the exception that samples intended for VOC analysis must be collected using either a bailer or a bladder pump.). Do not reuse a bailer in the field; used non-disposable bailers shall be returned to the office for decontamination.

4.5.3. To minimize agitation of the water column, samples shall be collected from the pump tubing in the following order into pre-labeled sample containers:

- Extractable organics (semi-volatile).
- Total petroleum hydrocarbons (TPH).
- Poly chlorinated biphenyls (PCBs).
- Metals.
- Phenols.
- Cyanide.
- Chloride and sulfate.
- Nitrate and ammonia.
- Turbidity.
- Radionuclides.

Samples to be analyzed for the following constituents shall be collected using a bailer, after any pump and tubing have been removed from the well. Removal of any down hole equipment shall be done carefully and in a manner that minimizes disturbance of the water column.

- Volatile organic compounds (VOCs).
- Purgeable organic carbon (POCs).
- Purgeable organic halogens (POX).
- Total organic halogens (TOX).
- Total organic carbon (TOC).

4.5.4. Samples shall be obtained from the monitoring wells as soon as possible after purging. This may require waiting an extended period for low-yielding wells.

4.5.5. Samples collected for VOC analysis shall be free of any air bubbles and inverted upon filling. Bacterial samples shall be collected using dedicated gloves; taking care not to allow anything to touch the inside of the sampling container.

4.5.6. Samples collected for dissolved metals analysis, which are to be filtered in the field, shall be passed through a 0.45 micron (maximum) filter (either in-line or under negative pressure) prior to placement in the sample bottle.

4.5.7. In situations where replicate samples shall be required, care shall be taken to ensure that each sample collected is independent.

4.5.8. In some situations, inorganic parameters may be sampled directly from a pump after completion of well evacuation procedures.

4.6. Post Sampling Procedures

4.6.1. As required, upon completion of all sampling procedures for a particular site, secure the lid of the cooler using packaging tape with the chain of custody inside.

4.6.2. If the laboratory is local, transport the samples directly to the laboratory and present them to the sample manager. The representative of LEA should witness the verification of the chain of custody and obtain a carbon copy for filing in the project notebook.

4.6.3. If the laboratory is distant, arrange for transport with a reputable carrier service. Typically, the laboratory specifies the carrier to be used and provides the shipping papers. The cooler and samples shall be secured for transport, and all mailing documentation secured onto the top of the cooler. Unless otherwise specified, delivery shall be overnight. Friday shipments should be mailed for Saturday delivery, once confirmed that the laboratory can accept them on Saturday. The laboratory shall provide confirmation of acceptance noting the temperature of the temperature blank and any deviations from the chain of custody.

4.7. Field Documentation

4.7.1. Field documentation shall include at a minimum: a chain-of-custody form, Field Data Record Groundwater Form, Sample Collection Form, Daily Field Report, Field Quality Review Checklist. Sample labels shall be used for proper sample identification.

4.7.1.1. The labels shall be sufficiently durable to withstand immersion for 48 hours without detaching and to withstand normal handling. The information provided shall be legible at all times.

4.7.1.2. The following information shall be provided on the sample label using an indelible-ink pen:

- Sample identification number.
- LEA Commission Number.
- Date and time of collection.
- Place of collection.
- Parameter(s) requested (if space permits).

4.7.1.3. A field logbook and/or appropriate field forms will be used to log all pertinent information with an indelible-ink pen. The following information shall be provided:

- Project and site identification.
- LEA commission number.
- Identification of well.
- Static water level measurement technique.
- Presence of immiscible layers and detection method.
- Time well purged.
- Collection method for immiscible layers and sample identification numbers.
- Well evacuation procedure/equipment.
- Sample withdrawal procedure/equipment.
- Date and time of collection.

- Types of sample containers used and sample identification numbers.
- Preservative(s) used.
- Parameters requested for analysis.
- Field analysis method(s).
- Whether or not field filtration was performed and the filter size, if appropriate.
- Field observations on day of sampling event.
- Record of site activities.
- Field personnel.
- Climatic conditions, including air temperature.
- Status of total production.
- Record of non-productive time.
- Name of all visitors to the site related to the project.

4.7.1.4. The chain-of-custody record shall include the following information:

- Company's name and location.
- Date and time of collection.
- Sample number.
- Container type, number, size.
- Preservative used.
- Signature of collector.
- Signatures of persons involved in the chain of possession.
- Analyses to be performed.
- Type and number of samples.

A separate entry shall be made for each sample, and within each sample each case that a different preservative is used.

4.7.1.5. The Field Data Record Groundwater Form shall be updated during the sampling of each well and include the following information:

- Identification of well.
- Well depth, diameter, depth to water.
- Static water level depth and measurement technique.
- Purge volume and pumping rate.
- Time well purged.
- LEA commission number.
- Date.

4.8. Equipment Decontamination

All materials and equipment, which enter a well, must be clean and free of any potential contaminants. In general, the equipment and materials entering the well shall be unused and preferably disposable. Any items not considered disposable should be decontaminated prior to commencing field activities. If field decontamination is required, the choice of decontamination procedures shall be based upon knowledge of the site-specific contaminants and as outlined in the site-specific work plan.

For sites at which the contaminants are unknown, but contamination is suspected, the decontamination procedures outlined below shall be followed.

4.8.1. Prior to commencing any field activities, the following solutions (as appropriate for the appropriate contaminants) shall be prepared and placed into 500-ml laboratory squirt bottles: 10% methanol in water; 10% nitric acid in water; 100% n-hexane; distilled, de-ionized water.

4.8.2. In the field, prepare approximately 2.5 gallons of a solution of Alconox® (or other suitable non-phosphate laboratory grade detergent) in tap water in a 5-gallon bucket.

4.8.3. Prepare a piece of 5-mil polyethylene sheeting to underlie the decontamination area. The sheeting shall be of sufficient size to contain any accidental discharge of decontamination solutions. The plastic shall be bermed to contain spills.

4.8.4. The order for decontaminating equipment is as follows:

1) Detergent scrub.
2) DI water rinse.
3) Hexane rinse (to be used only if separate-phase petroleum product, other than gasoline, is present).
4) DI water rinse.
5) 10% nitric acid rinse (to be used only when metals are suspected as potential contaminants).
6) DI water rinse.
7) Methanol rinse (<10% solution).
8) Air dry.

4.8.5. Materials considered disposable such as the bailer cord, pump tubing, filters, etc. shall not be decontaminated and shall be disposed of in accordance with all applicable municipal, state, and federal regulations.

4.8.6. Wrap each piece of decontaminated equipment in aluminum foil, as appropriate, to maintain cleanliness.

4.8.7. At the end of the project day, dispose of all spent decontamination fluids and materials such as the polyethylene sheeting and personal protective equipment in accordance with all applicable municipal, state, and federal regulations.

5. Quality Assurance/Quality Control

Typically samples taken for Quality Assurance/Quality Control for liquid sample collection include duplicate samples, equipment blanks and trip blanks. The necessity for these samples will be outlined in the site-specific work plan. In general, all QA/QC measures taken during liquid sample collection shall be in conformance with LEA's standard operating procedure (SOP) ID 10005. Standard QA/QC measure shall include the recording of pertinent information as follows:

5.1. The Field Instrument & Quality Assurance Record, which is a portion of the Daily Field Report, shall include the following information:

- Instrument make, model, and type.
- Calibration readings.
- Calibration/filtration lot numbers.
- Field personnel and signature.

5.2. The Field Quality Review Checklist, which is a portion of the Daily Field Report, shall assure the completeness of the sampling round and include the following information:

- Reviewer's name and date.
- Review of all necessary site activities and field forms.
- Statement of corrective actions for deficiencies.

6. References

6.1. EPA, *RCRA Groundwater Monitoring Technical Enforcement Guidance Document*, OSWER 9950.1, September 1986.

6.2. EPA, *Practical Guide for Groundwater Sampling*, EPA/600/2-85/104, September 1985.

6.3. DEP, Site Characterization Guidance Document, Draft, June 12, 2000.

END OF DOCUMENT

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
for
Quality Assurance/Quality Control Measures
for
Field Activities

SOP ID: 10005
Date Initiated: 02/20/90
Revision No. 004: 12/31/01

Approved By: ***/s/ Jeffrey J. Loureiro*** ***12/19/01***
Jeffrey J. Loureiro **Date**
President

/s/ Nick D. Skoularikis ***12/19/01***
Nick D. Skoularikis **Date**
Director of Quality

REVISION RECORD

Rev #	Date	Additions/Deletions/Modifications
Initial Issue	02/20/90	
001-003	-	No record.
004	12/31/01	Updated to reflect new SOP format. Added section 4.3, Results Evaluation. Minor revisions throughout.

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
for
Quality Assurance/Quality Control Measures
for
Field Activities

1. Statement of Purpose

This document describes procedures to be followed for proper Quality Assurance Quality Control (QA/QC) practices which shall incorporate all activities associated with sampling tool and instrument preparation, field measurements and sampling, proper documentation of field and post-field activities, QC sample preparation, chain-of-custody protocol and laboratory analytical procedures. The use of specific QA/QC measures is project-specific as defined in the project work plan. This standard operating procedure (SOP) was adopted in accordance with the Environmental Protection Agency (EPA) document *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846).

2. Definitions

2.1. Trip Blank: An aliquot of organic-free water or equivalent neutral reference material carried into the field but not exposed.

2.2. Equipment Blank: An aliquot of analyte-free deionized water processed through all sample collection equipment.

2.3. Replicate Samples: Samples that have been divided into two or more portions in the field.

2.4. Collocated Samples: Independent samples collected under identical circumstances in a way that they are equally representative of the parameter of interest.

2.5. Performance Evaluation (PE) Sample: A sample that mimics actual samples in all possible aspects, except that its composition is known to the auditor and unknown to the analyst.

3. Equipment

None

4. Procedure

4.1. General

4.1.1. All QA/QC sample preparation procedures shall be properly documented including:

- Name of person(s) or laboratory involved in sample preparation.
- Reagents used.
- Sample number.
- Analyses required.
- Concentration calculations.
- Accuracy of measurements.
- Number, type, size of containers used.
- Preservation method.
- Date and time of sample preparation.

4.1.2. All information shall be included in the field logbook and/or appropriate field forms, but not necessarily in the chain-of-custody record except as needed for proper sample identification and analysis. Blind sample numbers are being used in order not to disclose the nature of the sample to the laboratory. No information that would identify the sample as a QA/QC sample shall be included in the chain-of-custody record.

4.1.3. At the conclusion of each sampling day, a quality control review shall be conducted using the Field Quality Review Checklist and the Daily Field Report.

4.2. QC Sample Preparation

4.2.1. Trip Blank

4.2.1.1. Contaminated trip blanks may indicate contamination of the samples during the field trip or shipment to the lab, cross-contamination between the samples, contaminated sample vials, or improper handling.

4.2.1.2. Trip blanks shall be used only with samples that are to be analyzed for volatile organic compounds.

4.2.1.3. One trip blank shall be included per shipping container (cooler) carrying sample soil and/or groundwater samples that are to be analyzed for volatile organic compounds

4.2.1.4. Trip blanks are prepared using analyte-free deionized organic-free water prior to field activities associated with the sampling event, usually by the laboratory providing the sampling containers. Each trip blank is placed in a 40-ml glass VOA vial and is carried in the same shipping container as the sample(s). Trip blanks should not be opened at any time during transport.

4.2.2. Equipment Blank

4.2.2.1. The purpose of an equipment/rinsate blank is to determine if decontamination procedures were adequate or if any of the equipment might contribute contaminants to the sample.

4.2.2.2. An equipment blank is prepared by running analyte-free deionized water through all sample collection equipment (bailers, pumps, filters, split-spoon) and placing it in the appropriate sample containers for analysis. If equipment has been decontaminated in the field, the equipment blank shall be collected after decontamination procedures have been performed.

4.2.2.3. Equipment blanks shall be used when sampling surface water, groundwater, soil, and sediment.

4.2.2.4. One equipment blank shall be collected for each sample bottle/preservation technique/analysis procedure per matrix per sampling event, or as otherwise specified in project-specific documents.

4.2.3. Replicate Samples

4.2.3.1. Replicate samples provide precision information on handling, shipping, storage, preparation and laboratory analysis.

4.2.3.2. Replicate samples are samples that have been divided into two or more portions in the field. An example of a replicate sample is two identical sample bottles filled with water from the same bailer retrieval. To ensure homogeneity, the bailer should be emptied into a clean, decontaminated beaker used exclusively

for the purpose and containing sufficient volume for both sample containers, and from that into the sample containers.

4.2.3.3. Replicate samples cannot be used when sampling for volatile organic compounds.

4.2.3.4. One replicate sample shall be obtained for each sample bottle/preservation technique/analysis procedure per sampling event or one out of every 20 samples, unless collocated samples are used (see below), or as otherwise specified in project-specific documents.

4.2.4. Collocated Samples

4.2.4.1. Collocated samples provide precision information on sample acquisition, homogeneity, handling, shipping, storage, preparation and laboratory analysis.

4.2.4.2. Collocated samples are independent samples collected in such a way so that presumably they are equally representative of the parameter of interest. Examples of collocated samples are groundwater samples collected sequentially, soil core samples collected side-by-side, or air samples collected essentially at the same time from the same manifold.

4.2.4.3. Collocated samples are especially useful when sampling for volatile organic compounds, for which replicate samples cannot be used.

4.2.4.4. Collocated samples shall be obtained for each sample bottle/preservation technique/analysis procedure per sampling event or one out of every 20 samples, unless replicate samples are used (see above), or as otherwise specified in project-specific documents.

4.2.5. Split Samples

4.2.5.1. The purpose of split samples is to provide an assessment of the laboratory analytical procedure.

4.2.5.2. Split samples are collocated or replicate samples sent to two (or more) different laboratories.

4.2.5.3. Split samples can be used with any sample media. Split samples can be used in conjunction with spiked samples (see

below). In case contradictory results are obtained from the samples split between different laboratories, the spiked samples can be used to verify the analytical data (provided that the spiked samples were properly prepared and the appropriate documentation is available).

4.2.5.4. When used, one split/spiked sample per sample bottle/preservation technique/analysis procedure per sampling event or every 20 samples shall be included, or as specified in project-specific documents.

4.2.6. Spiked Samples

4.2.6.1. The purpose of spiked samples is to provide information on the precision of the laboratory analytical procedure. However, besides a wrong preparation, several other sources of error exist such as analyte stability, holding time and interactions with the sample matrix.

4.2.6.2. Spiked samples are samples spiked with the contaminants of interest. The compounds used for spiking should be of the same chemical group as the contaminants being investigated, but they do not have to be the exact chemical compounds. Spiking should be carefully designed and performed prior to the field investigations. Field matrix spikes are not generally recommended because of the high level of technical expertise required for proper preparation and documentation.

4.2.6.3. Can be used with any sample media, however, liquid matrices are preferred due to uniformity of mixing.

4.2.6.4. When used, one split/spiked sample per sample bottle/preservation technique/analysis procedure per sampling event or every 20 samples shall be included, or as otherwise specified in project-specific documents. In order to ensure defensible data, performance evaluation (PE) samples, prepared by an independent vendor, are typically being used. The ordering and handling procedures and record keeping requirements are discussed in Loureiro Engineering Associates, Inc. (LEA's) *SOP for Preparation of PE Samples* (SOP 10030).

4.3. Result Evaluation

4.3.1. The analytical results on QA/QC samples should be evaluated along with the remaining analytical data as follows:

4.3.1.1. No constituents should be detected in the trip blank or equipment blank.

4.3.1.2. The relative percent differences (RPDs) shall be computed for all constituents detected in both duplicate samples used.

The RPD between two measurements (e.g., M1 and M2) is calculated as follows:

$$RPD = \frac{|M1 - M2|}{(M1 + M2)/2} \times 100\%$$

4.3.1.3. Any deviations in the performance evaluation samples shall be brought to the attention of the laboratory. An investigation shall then be performed by the laboratory of the method used, laboratory QA/QC procedures followed, and computations performed. The laboratory shall report the results of their investigation and any corrective actions taken.

5. References

5.1. EPA, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846).

END OF DOCUMENT

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
for
Low Flow (Low Stress)
Liquid Sample Collection and Field Analysis

SOP ID: 10039
Date Initiated: 06/11/01
Revision No. 003: 04/01/05

Approved By: ***/s/ David C. Brisson*** ***04/01/05***
David C. Brisson **Date**
Project Geologist

/s/ Gail Batchelder ***04/01/05***
Gail L. Batchelder **Date**
Technical Director, Hydrogeology

/s/ Nick D. Skoularikis ***04/01/05***
Nick D. Skoularikis **Date**
Director of Quality

REVISION RECORD

Rev #	Date	Additions/Deletions/Modifications
Initial Issue	06/11/01	
001	04/01/02	Updated to reflect new SOP format.
002	12/02/02	Updated to reflect stabilization procedures.
003	04/01/05	Incorporated modified low-flow sampling procedure to include the use of a peristaltic pump.

Loureiro Engineering Associates, Inc.
Standard Operating Procedure
For
Low Flow (Low Stress)
Liquid Sample Collection and Field Analysis

1. Purpose and Scope

This standard operating procedure (SOP) describes the procedures to be followed for measurement of static water level elevations, detection of immiscible layers, well evacuation, sample withdrawal, and field analyses utilizing low flow sampling techniques.

2. Definitions

2.1. Immiscible layers: The term is used to denote free-phase liquids that may be present in the aquifer as a result of a release. These liquids may have a density lighter than water (light non-aqueous phase liquids (LNAPL) or floaters) or heavier than water (dense non-aqueous phase liquids (DNAPL) or sinkers).

3. Equipment

3.1. Equipment required for the collection and field analysis of liquid samples shall include:

- Water-level indicator (accurate to 0.01 foot).
- Distilled water.
- Hand towels.
- Portable volatile organic compound (VOC) analyzer (Photovac MicroTIP®, Foxboro OVA® or equivalent).
- Interface probe/clear view bailer (to check for light non-aqueous phase liquids only).
- Flow-through cell capable of monitoring pH, temperature, specific-conductance, oxidation reduction potential (Eh), dissolved oxygen (DO), and turbidity.
- Polyethylene plastic sheeting.

- Adjustable rate submersible pump (preferred), adjustable rate centrifugal pump, bladder pump (constructed of stainless steel or Teflon®), or adjustable rate peristaltic pump
- Appropriate tubing for the pump used, for instance polyethylene tubing (1/4 to 3/8 inch outer diameter (O.D.)) for the peristaltic pump
- Clean disposable gloves.
- Alconox®, or other non-phosphate laboratory grade detergent.
- Three 5-gallon buckets.
- Decontamination brushes.
- Distilled, de-ionized (DI) water.
- Decontamination fluids (less than 10 percent methanol in water, 100 percent n-hexane, and 10 percent nitric acid).

4. Procedure

4.1. Health & Safety Requirements

All health and safety requirements described in the site specific Health & Safety Plan and/or Job Hazard analysis shall be observed

4.2. Equipment Decontamination

All materials and equipment that enter a well must be clean and free of any potential contaminants. Do not use any contaminated equipment or materials which are not designed to be used for groundwater monitoring, even if this means that the sampling will not be performed as planned.

In general, the choice of decontamination procedures should be based upon knowledge of the site-specific contaminants and outlined in the site-specific work plan.

For sites at which the contaminants are unknown, but contamination is suspected, the decontamination procedures outlined below should be followed.

4.2.1. Prior to commencing any field activities, the following solutions (as appropriate for the appropriate contaminants) should be prepared and placed into 500-ml laboratory squirt bottles: less than 10 percent

methanol in water; 10 percent nitric acid in water; 100 percent n-hexane; distilled, de-ionized water.

4.2.2. In the field, prepare approximately 2.5 gallons of a solution of Alconox® (or other suitable non-phosphate laboratory grade detergent) in tap water in a 5-gallon bucket.

4.2.3. Prepare a piece of 5-mil polyethylene sheeting to underlie the decontamination area. The sheeting should be of sufficient size to contain any accidental discharge of decontamination solutions. The plastic should be bermed to contain spills.

4.2.4. The order for decontaminating equipment is as follows:

1) Detergent scrub.
2) DI water rinse.
3) Hexane rinse (to be used only if separate-phase petroleum product, other than gasoline, is present).
4) DI water rinse.
5) 10 percent nitric acid rinse (to be used only when metals are suspected as potential contaminants).
6) DI water rinse.
7) Methanol rinse (less than 10 percent solution).
8) Air dry.

4.2.5. Materials such as the bailer cord should not be decontaminated and should just be disposed of after each test. Note: Bailers should be used **only** to check for LNAPL before sample collection using low-flow/low stress procedures. A bailer may be used to check for DNAPL only **after** all sample collection equipment has been removed from the well.

4.2.6. Wrap each piece of decontaminated equipment in aluminum foil, as appropriate, to maintain cleanliness.

4.2.7. At the end of the project day, dispose of all spent decontamination fluids and materials such as the polyethylene sheeting and personal protective equipment in accordance with all applicable municipal, state, and federal regulations.

4.3. Sample Collection

4.3.1. Immediately upon opening the well, the air in the well head will be sampled for VOCs using a portable VOC analyzer, such as a Photovac

MicroTIP® or equivalent. The instrument shall be zeroed with ambient air prior to the measurement, and the highest reading observed shall be recorded for each well. Measurements should be taken until stabilization of the readings has occurred.

4.4. Detection of Immiscible Layers

4.4.1. Should evidence warrant, a sampling event shall include provisions for the detection of immiscible phases prior to well evacuation or sample collection. LNAPLs are relatively insoluble liquid organic compounds with densities less than that of water (1 g/ml), while DNAPLs are organic compounds with densities greater than that of water. Lighter and/or denser immiscible phases may be encountered in a groundwater monitoring well.

4.4.2. An interface probe will be used to determine the existence of any immiscible layers, light or dense. Alternatively, a clear fluorocarbon resin or PVC bailer may be used to determine the existence of the phases or oil sheen in the well when no accurate determination of the immiscible layer thickness is required. As noted above, efforts to detect LNAPL only can be performed prior to sample collection. Efforts to detect DNAPL can be performed only AFTER sample collection has occurred.

4.4.3. Should elevations of the immiscible layers be required, levels of the fluids shall be measured to an accuracy of 0.01 feet using an electronic interface probe capable of detecting the interfaces between air, product, and water. The interface levels shall be recorded in the field form. Adjustments of the observed head to the theoretical hydraulic head shall be calculated based on the density conversion factor associated with the particular non-aqueous phase liquid.

4.4.4. If LNAPL is detected in a well, collection of a groundwater sample from that well is not recommended unless otherwise specified in the site-specific work plan or work instruction. However, if a groundwater sample must be collected from that well, low-flow sampling is the recommended technique, although care must be taken to minimize mobilization of the LNAPL into the zone from which the sample will be collected.

4.5. Measurement of Static Water Level

4.5.1. The static water elevations in each well shall be measured prior to each sampling event. This is performed initially to characterize the site, and in subsequent sampling rounds to determine whether horizontal or vertical flow gradients have changed. A change in hydrologic conditions may necessitate modification of the groundwater monitoring program.

4.5.2. Remove the protective cover and locking cap from the well.

4.5.3. Each well shall have a surveyed reference point located at the top of the well casing with the locking cap removed. The reference point shall be easily recognizable, since the personnel conducting the sampling may differ from one sampling event to the next.

4.5.4. The following parameters shall be measured with an accuracy of 0.01 ft:

- Depth to standing water.
- Depth to bottom of well.

4.5.5. A water-level indicator with a fiberglass tape will be used for measurement. As a result of possible pressure differences between the well atmosphere and the ambient atmosphere, the water level will be allowed fifteen minutes to equilibrate upon removal of the well cap. If excess pressure is encountered the water level will be allowed greater than fifteen minutes to equilibrate upon removal of the well cap. The results shall be recorded on the appropriate field form(s).

4.5.6. Total depth measurements will be compared to original depths to determine the degree of siltation that may have occurred. This information shall be noted on the field forms. Should significant siltation occur in any well, the well shall be redeveloped by an approved method.

4.5.7. The portion of the tape immersed in the well shall be decontaminated during retrieval using a distilled water rinse followed by drying with a clean wipe, prior to use in another well. This decontamination procedure shall be amended, as needed, to accommodate the specific type of contamination anticipated.

4.5.8. The static water level should be monitored and recorded throughout the purging and sampling of each well.

4.6. Field Analysis

4.6.1. Parameters that are physically or chemically unstable shall be tested utilizing a flow-through cell. Such parameters as pH, temperature, specific conductance, DO, Eh, and turbidity will be measured in the field at the temperature of the well sample.

4.6.2. Parameters such as pH, temperature, specific conductance, DO, and Eh shall be measured using a flow-through-cell (YSI model 6820 or equivalent). The meter shall be calibrated prior to use and at the end of the day using supplied solutions in accordance with the instructions provided by the manufacturer. Calibration information will be recorded in the field before and after each calibration.

4.5.3 Turbidity can be measured with a separate turbidimeter, although some flow-through cells include a turbidimeter. It is useful to have a separate turbidimeter on hand to check the validity of the turbidity values obtained using the flow-through cell if there is difficulty reaching low turbidity values or if the turbidity readings recorded do not seem to be consistent with visual observation of the water samples. All samples, including turbidity samples and samples to be submitted for analysis, must be collected before the groundwater passes through the flow-through cell to prevent cross-contamination by potentially stagnant fluid within the flow-through cell. This can be accomplished by using a bypass assembly or disconnecting the tubing from the flow-cell inlet prior to sampling.

4.7. Well Evacuation

4.7.1. Calculate standing water in the well based on the following schedule and record on the appropriate field form:

Well Diameter (inches)	Conversion Factor (gal/feet)
2	0.163
4	0.654
6	1.47

4.7.2. Generally, a submersible, air-lift, bladder, or peristaltic pump equipped with appropriate tubing of inert materials (such as polyethylene), shall be used to evacuate the monitoring wells.

4.7.3. A new piece of polyethylene plastic shall be placed on the ground adjacent to the well. Sampling and purging equipment such as the pump, tubing, containers, etc., shall be placed on the polyethylene sheet, never on the ground.

4.7.4. The pumps and tubing shall be prepared for insertion into the well while wearing disposable gloves. Make sure that any tubing or pump apparatus is of sufficient length to reach the appropriate depth for pumping.

4.7.5. Lower the pump and/or tubing gently into the water column to the midpoint of the saturated portion of the screened interval, unless otherwise specified. A site-specific sampling plan should specify the sampling depth, or provide specific criteria for the selection of intake depth for each well. If possible keep the pump intake two feet above the bottom of the well. Start the pump at the lowest speed setting and slowly increase the speed until discharge occurs. The initial pumping rate shall be approximately 0.1 liters per minute, however, the pumping rate shall not exceed 0.25 liters per minute. Measure the water level to ensure that drawdown in excess of 0.3 feet does not occur in the well. Adjust the pumping rate as necessary until little or no drawdown occurs. If the drawdown exceeds 0.3 feet, reduce pumping rate if possible. If drawdown still does not stabilize at a depth above the pump intake, shut the pump down and allow the well to recharge. It should be noted that stable drawdowns of 0.3 feet are desirable but not mandatory. Stabilization of the drawdown to a depth greater than 0.3 feet is acceptable as long as the depth at which stabilization occurs is above the pump intake. However, it is important that the stabilization depth is clearly recorded and maintained.

4.7.6. Monitor and record the water level and pumping rate at a minimum of every five minutes during purging. Calculate the volume of the discharge tubing, bladder pump (if used), and the flow-through cell. Monitor and record indicator field parameters (turbidity, pH, Eh, DO, temperature and specific conductance) in the well from the first water extracted during the purging process and at least every five minutes thereafter. Stabilization is considered to be achieved when three consecutive readings are within the following limits and no increasing or decreasing trend in the data can be observed:

- Turbidity (10% for values less than 5 and greater than 1 NTU). It should be noted that achievements of turbidity levels less than 5 NTUs are not mandatory but efforts should be made to collect a groundwater samples with the lowest turbidity achievable.

- DO (10%, measured as milligrams per liter).

- Specific Conductance and Temperature (3%).

- pH (+/- 0.1 unit).

- ORP/Eh (+/- 10 millivolts).

4.7.7. If after 2.5 hours of purging or the purging of three well volumes, (whichever comes first) the field parameters have not stabilized, purging may be discontinued to allow sample collection. Similarly, if it is not possible to obtain stabilization as described above as a result of slow recovery of the well, the well shall be evacuated and allowed to recover, at which point the samples should be collected immediately. The appropriate sampling forms shall include a notation that sample collection occurred without stabilization. Samples obtained from slow-yielding wells shall be collected as soon as a sufficient volume is available for a sample for each parameter.

4.7.8. Do **not** re-use purging equipment. Pumps shall be decontaminated between monitoring wells, in accordance with procedures noted in Section 4.1.

4.7.9. Record sampler's name, sampling time, volume of water purged, parameters measured, weather conditions, sample number, analyses required and all other pertinent information in the field notebook and/or appropriate field forms, and complete the chain of custody form.

4.7.10. Any water purged from the monitoring wells shall be stored in appropriate containers until the laboratory analyses are available. Then it should be disposed of in accordance with all applicable local, state and federal requirements.

4.7.11. Storage shall be in containers approved for storage of hazardous materials, and in an appropriate designated location at the facility.

4.8. Sample Withdrawal

4.8.1. In order to ensure that the groundwater sample is representative of the formation, it is important to minimize physical alteration (i.e. agitation during purging and/or sample collection) or chemical contamination of the sample during the withdrawal process.

4.8.2. Use an appropriate pump to purge each well; the same pump used for purging shall be used for sample withdrawal.

4.8.3. The samples shall be collected at a location before entering the flow-through cell. To minimize the effects of water column agitation on sample quality, samples shall be collected from the pump tubing in the following order into pre-labeled sample containers:

- VOCs.
- Total petroleum hydrocarbons.
- Extractable organics (semivolatiles).
- PCBs.
- Metals.
- Phenols.
- Cyanide.
- Chloride and sulfate.
- Nitrate and ammonia.
- Turbidity.
- Radionuclides.
- Purgeable organic carbon (POCs).
- Purgeable organic halogens (POX).
- Total organic halogens (TOX).
- Total organic carbon (TOC).

4.8.4. Samples shall be obtained from the monitoring wells as soon as possible after purging. This may require waiting an extended period for low-yielding wells.

4.8.5. Samples collected for VOC analysis shall be free of any air bubbles and inverted upon filling. Bacterial samples shall be collected using dedicated gloves; taking care not to allow anything to touch the inside of the sampling container.

4.8.6. Samples collected for metals analysis, which are to be filtered in the field, shall be passed through an appropriately sized filter prior to placement in the sample bottle. Pre-rinse the filter with approximately 25 to 50 milliliters of groundwater prior to collecting the filtered metals sample. Filter sizes will generally be either 0.45 microns for dissolved metals and 10 microns for metals that could be present as colloids or adsorbed onto colloids that could be mobile in the aquifer. The appropriate filter size for the individual project must be provided in site-specific work instructions.

4.9. "What If" Scenarios

4.9.1. Certain field conditions may be encountered that influence the choice of equipment to be used or altogether limit the feasibility of low-flow sampling techniques. The following is a brief description of select scenarios to provide field personnel with a guideline if similar circumstances are encountered

4.9.2. Turbidity

4.9.2.1. If turbidity measurements do not stabilize as described above after 2.5 hours of purging or the evacuation of three well volumes, whichever comes first, sample collection can be initiated. Record observations of the color, clarity, and other observable characteristics of the groundwater (such as the presence or absence of particles) in the field paperwork

4.9.2.2. If samples are being collected for analysis for total (unfiltered) metals and the turbidity has not stabilized below 10 NTU, a sample for additional analysis for metals should also be collected after being filtered in the field through an in-line 10-micron filter, if specified in the work instructions.

4.9.3. Peristaltic Pump

4.9.3.1. Difficulty may be encountered while advancing the flexible polyethylene peristaltic pump tubing to the desired depth within a deep well or older well. Excessive friction may result from the tubing contacting the sidewall of the well casing or accumulations of material on the well casing (i.e. mineral and bacterial deposits). In these scenarios, the tubing may coil within the well during advancement and prevent the desired depth from being attained. Efforts to weight the tubing should be attempted before using alternate pumping techniques.

4.9.3.2. If such well conditions are expected, a bladder pump or similarly submersible pump should be used instead of a peristaltic pump. A bladder pump provides sufficient mass on the tubing to allow for advancement in deep or older wells.

4.9.3.3. A peristaltic pump cannot be used to sample wells in which the depth to water is greater than approximately 25 feet.

4.9.4. Sampling Depth

4.9.4.1. If conditions exist that prevent the appropriate pump or tubing from being advanced to the midpoint of the saturated portion of the screened interval, low-flow sampling techniques shall not be used. Instead, sampling shall be conducted using conventional purging and sampling techniques, as described in LEA SOP 10004 entitled *Liquid Sample Collection and Field Analysis*. Justification for not using low-flow sampling techniques must be provided in the field paperwork.

4.10. Field Documentation

4.10.1. Field documentation shall include at a minimum: a chain-of-custody form, Field Data Record Groundwater Form, Sample Collection Form, Daily Field Report. Sample labels and sample seals shall be used for proper sample identification.

4.10.1.1. The labels shall be sufficiently durable to withstand immersion for 48 hours without detaching and to withstand normal handling. The information provided shall be legible at all times.

4.10.1.2. The following information shall be provided on the sample label using an indelible pen:

- Sample identification number.
- Date and time of collection.
- Place of collection.
- Parameter(s) requested (if space permits).

4.10.1.3. Appropriate field forms will be used to log all pertinent information with an indelible pen. The following information shall be provided:

- Project and site identification.
- LEA commission number.
- Identification of well.
- Static water level measurement technique.
- Presence of immiscible layers and detection method.
- Time well purged.
- Collection method for immiscible layers and sample identification numbers.
- Well evacuation procedure/equipment.
- Sample withdrawal procedure/equipment.
- Date and time of collection.
- Types of sample containers used and sample identification numbers.
- Preservative(s) used.
- Parameters requested for analysis.
- Field analysis method(s).
- Whether or not field filtration was performed and the filter size, if appropriate.
- Field observations on day of sampling event.
- Record of site activities.
- Field personnel.

- Climatic conditions, including air temperature.
- Status of total production.
- Record of non-productive time.

4.10.1.4. The Field Sampling Record shall include at a minimum the following information:

- Identification of well.
- Date and time of collection.
- Name of collector.
- Sample number.

4.10.1.5. The chain-of-custody record shall include the following information:

- Company's name and location.
- Date and time of collection.
- Sample number.
- Container type, number, size.
- Preservative used.
- Signature of collector.
- Signatures of persons involved in the chain of possession.
- Analyses to be performed.
- Type and number of samples.

4.10.1.6. The Field Data Record Groundwater Form shall be updated during the sampling of each well and include the following information:

- Identification of well.
- Well depth, diameter, depth to water.
- Static water level depth and measurement technique.
- Purge volume and pumping rate.
- Time well is purged.

- Measurements of initial field parameters and all subsequent readings.
- Any specific circumstances, as described above, such as field filtering, lack of stabilization of parameters, water characteristics, etc.
- LEA commission number.
- Date.

4.10.1.7. The Daily Field Record shall include the following information:

- Client's name, location, LEA commission number, date.
- Instrument make, model, and type.
- Calibration readings.
- Calibration/filtration lot numbers.
- Field personnel and signature.

4.10.1.8. The Daily Field Record shall assure the completeness of the sampling round and include the following information:

- Reviewer's name, date, and LEA commission number.
- Review of all necessary site activities and field forms.
- Statement of corrective actions for deficiencies.

5. References

5.1. United States Environmental Protection Agency (EPA), Region I. *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells,* July 30, 1996, Revision 2.

5.2. EPA. *Groundwater Sampling Guidelines for Superfund and RCRA Project Managers – Groundwater Forum Issue Paper,* Office of Solid Waste and Emergency Response, (EPA 542-S-02-001), May 2002.

5.3. Robert W. Puls and Michael Barcelona, EPA. *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures,* in Groundwater Issue, (EPA/540/S-95/504), April 1996.

5.4. Connecticut Department of Environmental Protection, Bureau of Water Management, Permitting Enforcement and Remediation Division. *Site Characterization Guidance Document,* Draft, June 12, 2000.

END OF DOCUMENT

ATTACHMENT C-2

Performance Evaluation Sample Results

RESULTS OF PERFORMANCE SAMPLE EVALUATION

P&W East Hartford, East Hartford, Connecticut: WILLOW POND

Loureiro Engineering Associates, Inc.

Location Identifier: Performance
Sample Identifier 1241367 09/29/2011 11:20 Performance Evaluation, Water

Chemical Name	Reported Concentration	Qualifiers	R.L.	M.D.L.	Units	Dil.	Lab.	Lab. Number	Reference	Upper Limit	Lower Limit	Result
1,1,1,2-Tetrachloroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,1,1-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,1,2,2-Tetrachloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,1,2-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,1,2-Trichlorotrifluoroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,1-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,1-Dichloroethylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,1-Dichloropropene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2,3-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2,3-Trichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2,4-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2,4-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2-Dibromo-3-Chloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,2-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
1,2-Dichloropropane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
1,3,5-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
1,3-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
2-Hexanone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
4-Isopropyltoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Acetone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Acrylonitrile	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Arochlor 1016	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1221	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1232	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1242	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1248	0.86		0.25		ug/L	1	ACTM	MC4100-12	1.29	1.77	0.669	Pass
Arochlor 1254	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1260	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1262	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arochlor 1268	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	MC4100-12				
Arsenic (unfiltered)	0.0070		0.0040	0.00083	mg/L	1	ACTM	MC4100-13	0.00700	0.00769	0.00605	Pass
Barium (unfiltered)	0.389		0.05	0.001	mg/L	1	ACTM	MC4100-13	0.400	0.435	0.364	Pass
Benzene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM	MC4100-12				
Bromobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				

RESULTS OF PERFORMANCE SAMPLE EVALUATION

P&W East Hartford, East Hartford, Connecticut: WILLOW POND

Loureiro Engineering Associates, Inc.

Bromodichloromethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Bromoform	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Bromomethane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Butyl Benzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Cadmium (unfiltered)	0.0956		0.0040	0.00018	mg/L	1	ACTM	MC4100-13	0.100	0.106	0.0877	Pass
Carbon Disulfide	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Carbon Tetrachloride	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Chlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Chlorodibromomethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Chloroethane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Chloroform	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Chloromethane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Chromium, Total (unfiltered)	0.199		0.01	0.00066	mg/L	1	ACTM	MC4100-13	0.200	0.218	0.182	Pass
Copper (unfiltered)	0.0398		0.025	0.0013	mg/L	1	ACTM	MC4100-13	0.0400	0.0436	0.0360	Pass
Dichlorodifluoromethane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Ethylbenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Ethylene Dibromide	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Hexachlorobutadiene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Isopropylbenzene (Cumene)	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Lead (unfiltered)	ND<0.0050	U	0.0050	0.0012	mg/L	1	ACTM	MC4100-13				
Mercury (unfiltered)	ND<0.00020	U	0.0002	0.000018	mg/L	1	ACTM	MC4100-13				
Methyl Ethyl ketone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Methyl Isobutyl ketone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Methyl tert-Butyl ether	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Methylene Chloride	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	MC4100-12				
Methylene Dibromide	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Naphthalene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Nickel (unfiltered)	0.597		0.04	0.00022	mg/L	1	ACTM	MC4100-13	0.600	0.657	0.544	Pass
Propylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Selenium (unfiltered)	ND<0.01	U	0.01	0.0021	mg/L	1	ACTM	MC4100-13				
Silver (unfiltered)	ND<0.0050	U	0.0050	0.00076	mg/L	1	ACTM	MC4100-13				
Styrene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
Tetrachloroethylene	66.1		1.0		ug/L	1	ACTM	MC4100-12	71.6	85.7	45.0	Pass
Tetrahydrofuran	ND<10	U	10	10	ug/L	1	ACTM	MC4100-12				
Toluene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Trichloroethylene	36.0		1.0		ug/L	1	ACTM	MC4100-12	38.3	46.0	28.1	Pass
Trichlorofluoromethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Vinyl Chloride	104		1.0		ug/L	1	ACTM	MC4100-12	98.4	149	55.5	Pass
Xylenes,m- & p-	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
Zinc (unfiltered)	0.0306		0.02	0.00012	mg/L	1	ACTM	MC4100-13	0.0300	0.0331	0.0272	Pass

RESULTS OF PERFORMANCE SAMPLE EVALUATION

P&W East Hartford, East Hartford, Connecticut: WILLOW POND

Loureiro Engineering Associates, Inc.

cis-1,2-Dichloroethylene	103		1.0		ug/L	1	ACTM	MC4100-12	102	125	80.0	Pass
cis-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM	MC4100-12				
m-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
o-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
o-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
o-Xylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
p-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
p-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	MC4100-12				
sec-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
sec-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
tert-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				
trans-1,2-Dichloroethylene	97.6		1.0		ug/L	1	ACTM	MC4100-12	100	126	74.3	Pass
trans-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM	MC4100-12				
trans-1,4-Dichlorobutene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	MC4100-12				

Location Identifier: Performance

Sample Identifier 1241368 09/29/2011 11:50 Performance Evaluation, Water

Chemical Name	Reported Concentration	Qualifiers	R.L.	M.D.L.	Units	Dil.	Lab.	Lab. Number	Reference	Upper Limit	Lower Limit	Result
Total Petroleum Hydrocarbons (CT ETPH)	1.13		0.080		mg/L	1	ACTM	MC4100-14	1.51	1.82	0.458	Pass

ATTACHMENT C-3

Data Quality Assessment Worksheets

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Accutest
Project: Willow Brook Pond - GWM 2011
Commission # 88UT059.001
SDG: M98644
Date Samples Collected 3/21/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

CONSTITUENTS OF CONCERN BASED ON DETECTS TABLE GENERATED FOR THE FOLLOWING DATE RANGE: 3.21.11-3.22.11
Low bias Constituents of Concern: None

REPORTING LIMITS CHECKED FOR THE FOLLOWING REGULATORY CRITERIA LISTS: SWPC, IVC, IVC (draft)
RL exceeded for Regulatory Criteria (no dilution): None

Note 1: **Bias High: reported result may be lower, RLs are accepted as reported.**
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R or Method Blank Contamination	RPD	BIAS	COMMENTS
M98644	1167437	-1	WT-MW-40	1,2-Dichloroethane	Laboratory Control Sample	149%		High	
M98644	1167437	-1	WT-MW-40	Carbon tetrachloride	Laboratory Control Sample	168%		High	
M98644	1167437	-1	WT-MW-40	Dichlorodifluoromethane	Laboratory Control Sample	133%		High	
M98644	1167437	-1	WT-MW-40	Methylene bromide	Laboratory Control Sample	131%		High	
M98644	1167437	-1	WT-MW-40	Trichlorofluoromethane	Laboratory Control Sample	182%		High	
M98644	1167438	-3	WT-MW-58	1,2-Dichloroethane	Laboratory Control Sample	149%		High	
M98644	1167438	-3	WT-MW-58	Carbon tetrachloride	Laboratory Control Sample	168%		High	
M98644	1167438	-3	WT-MW-58	Dichlorodifluoromethane	Laboratory Control Sample	133%		High	
M98644	1167438	-3	WT-MW-58	Methylene bromide	Laboratory Control Sample	131%		High	
M98644	1167438	-3	WT-MW-58	Trichlorofluoromethane	Laboratory Control Sample	182%		High	
M98644	1167439	-5	WT-MW-19I	No QC Issues					
M98644	1167452	-7	TRIP BLANK	1,2-Dichloroethane	Laboratory Control Sample	149%		High	
M98644	1167452	-7	TRIP BLANK	Carbon tetrachloride	Laboratory Control Sample	168%		High	
M98644	1167452	-7	TRIP BLANK	Dichlorodifluoromethane	Laboratory Control Sample	133%		High	
M98644	1167452	-7	TRIP BLANK	Methylene bromide	Laboratory Control Sample	131%		High	
M98644	1167452	-7	TRIP BLANK	Trichlorofluoromethane	Laboratory Control Sample	182%		High	
M98644	1167437uf	-2	WT-MW-40	No QC Issues					
M98644	1167438uf	-4	WT-MW-58	No QC Issues					

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Accutest
Project: Willow Brook Pond - GWM 2011
Commission # 88UT059.001
SDG: M98677
Date Samples Collected 3/22/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

CONSTITUENTS OF CONCERN BASED ON DETECTS TABLE GENERATED FOR THE FOLLOWING DATE RANGE: 3.21.11-3.22.11
Low bias Constituents of Concern: None

REPORTING LIMITS CHECKED FOR THE FOLLOWING REGULATORY CRITERIA LISTS: SWPC, IVC, IVC (draft)
RL exceeded for Regulatory Criteria (no dilution): None

Note 1: **Bias High: reported result may be lower, RLs are accepted as reported.**
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R or Method Blank Contamination	RPD	BIAS	COMMENTS
M98677	1167440	-22	WT-MW-57	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167441	-20	WT-MW-48	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167442	-18	WT-MW-47	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167443	-4	WT-MW-42	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167443	-4	WT-MW-42	Acrylonitrile	MS/MSD	532% / 556%		High	
M98677	1167444	-6	WT-MW-44	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167445	-8	WT-MW-59	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167445	-8	WT-MW-59	All PCBs	Surrogate Recovery	207%		High	
M98677	1167446	-10	WT-MW-50	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167447	-12	WT-MW-19SR	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167448	-14	WT-MW-46	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167449	-2	EQUIPMENT	Acetone	ICV	>35% Diff		non-directional	
M98677	1167449	-2	EQUIPMENT	Acrylonitrile	Laboratory Control Sample	398% / 386%		High	
M98677	1167449	-2	EQUIPMENT	Chloromethane	Laboratory Control Sample	69%		Low	
M98677	1167449	-2	EQUIPMENT	Dichlorodifluoromethane	Laboratory Control Sample	65% / 63%		Low	
M98677	1167450	-1	TRIP BLANK	Acetone	ICV	>35% Diff		non-directional	
M98677	1167450	-1	TRIP BLANK	Acrylonitrile	Laboratory Control Sample	398% / 386%		High	
M98677	1167450	-1	TRIP BLANK	Chloromethane	Laboratory Control Sample	69%		Low	
M98677	1167450	-1	TRIP BLANK	Dichlorodifluoromethane	Laboratory Control Sample	65% / 63%		Low	
M98677	1167451	-16	WT-MW-50	Acrylonitrile	Laboratory Control Sample	526%		High	
M98677	1167440uf	-23	WT-MW-57	No QC Issues					
M98677	1167441uf	-21	WT-MW-48	No QC Issues					
M98677	1167442uf	-19	WT-MW-47	No QC Issues					
M98677	1167443uf	-5	WT-MW-42	No QC Issues					
M98677	1167444uf	-7	WT-MW-44	No QC Issues					
M98677	1167445uf	-9	WT-MW-59	No QC Issues					
M98677	1167446uf	-11	WT-MW-50	No QC Issues					
M98677	1167447uf	-13	WT-MW-19SR	No QC Issues					
M98677	1167448uf	-15	WT-MW-46	No QC Issues					
M98677	1167449uf	-3	EQUIPMENT	No QC Issues					
M98677	1167451uf	-17	WT-MW-50	No QC Issues					

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Spetrum Analytical
Project: PWCTEH: Northwest GW/SW Study
Commission # 88UT922.001
SDG: MC1274
Date Samples Collected 6/21/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

Detects: Potential Constituents of Concern (detected) in this SDG: **See bold below** **Bold**

REPORTING LIMITS CHECKED FOR THE FOLLOWING REGULATORY CRITERIA LISTS: RVC, IVC, SWPC RVC, IVC, SWPC
RL exceeded for Regulatory Criteria None

Note 1: **Bias High: reported result may be lower, RLs are accepted as reported.**
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R or Method Blank Contamination	RPD	BIAS	Sample Result	COMMENTS
MC1274	1230736	1	WT-MW-59	2-Butanone	Initial Calibration Verification	>35%		nondirectional	ND<5.0 ug/l	
MC1274	1230736	1	WT-MW-59	Bromomethane	Laboratory Control Sample	50%		low	ND<2.0 ug/l	
MC1274	1230736	1	WT-MW-59	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230736	1	WT-MW-59	Carbon Tetrachloride	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230736	1	WT-MW-59	Chloromethane	Quadratic Regression	-		nondirectional	ND<2.0 ug/l	
MC1274	1230736	1	WT-MW-59	Freon-113	Quadratic Regression	-		nondirectional	ND<5.0 ug/l	
MC1274	1230736	1	WT-MW-59	Methyl tert butyl ether	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230736	1	WT-MW-59	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	194%		high	ND<5.0 ug/l	
MC1274	1230736	1	WT-MW-59	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230737	3	WT-MW-58	2-Butanone	Initial Calibration Verification	>35%		nondirectional	ND<5.0 ug/l	
MC1274	1230737	3	WT-MW-58	All VOCs (Aromatics)	pH>2	>2		low		
MC1274	1230737	3	WT-MW-58	Bromomethane	Laboratory Control Sample	50%		low	ND<2.0 ug/l	
MC1274	1230737	3	WT-MW-58	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230737	3	WT-MW-58	Carbon Tetrachloride	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230737	3	WT-MW-58	Chloromethane	Quadratic Regression	-		nondirectional	ND<2.0 ug/l	
MC1274	1230737	3	WT-MW-58	Freon-113	Quadratic Regression	-		nondirectional	ND<5.0 ug/l	
MC1274	1230737	3	WT-MW-58	Methyl tert butyl ether	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230737	3	WT-MW-58	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	194%		high	ND<5.0 ug/l	
MC1274	1230737	3	WT-MW-58	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230738	5	WT-MW-50	2-Butanone	Initial Calibration Verification	>35%		nondirectional	ND<5.0 ug/l	
MC1274	1230738	5	WT-MW-50	Bromomethane	Laboratory Control Sample	50%		low	ND<2.0 ug/l	
MC1274	1230738	5	WT-MW-50	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230738	5	WT-MW-50	Carbon Tetrachloride	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230738	5	WT-MW-50	Chloromethane	Quadratic Regression	-		nondirectional	ND<2.0 ug/l	
MC1274	1230738	5	WT-MW-50	Freon-113	Quadratic Regression	-		nondirectional	ND<5.0 ug/l	
MC1274	1230738	5	WT-MW-50	Methyl tert butyl ether	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230738	5	WT-MW-50	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	194%		high	ND<5.0 ug/l	
MC1274	1230738	5	WT-MW-50	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Bromomethane	Laboratory Control Sample	58%		low	ND<2.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Bromomethane	Matrix Spike	52% / 55%		low	ND<2.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	161%		high	ND<5.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Trans-1,4-dichloro-2-butene	Matrix Spike	173% / 171%		high	ND<5.0 ug/l	
MC1274	1230739	7	WT-MW-19SR	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230740	12	WT-MW-21I	1,2,3-trichloropropane	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230740	12	WT-MW-21I	Bromomethane	Laboratory Control Sample	52%		low	ND<2.0 ug/l	
MC1274	1230740	12	WT-MW-21I	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230740	12	WT-MW-21I	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	182%		high	ND<5.0 ug/l	
MC1274	1230740	12	WT-MW-21I	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230741	14	WT-MW-21S	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230742	16	WT-MW-07S	1,2,3-trichloropropane	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230742	16	WT-MW-07S	Bromomethane	Laboratory Control Sample	52%		low	ND<2.0 ug/l	
MC1274	1230742	16	WT-MW-07S	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230742	16	WT-MW-07S	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	182%		high	ND<5.0 ug/l	
MC1274	1230742	16	WT-MW-07S	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	161%		high	ND<5.0 ug/l	
MC1274	1230742	16	WT-MW-07S	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230743	18	WT-MW-07D	1,2,3-trichloropropane	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230743	18	WT-MW-07D	Bromomethane	Laboratory Control Sample	52%		low	ND<2.0 ug/l	
MC1274	1230743	18	WT-MW-07D	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230743	18	WT-MW-07D	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	161%		high	ND<5.0 ug/l	
MC1274	1230743	18	WT-MW-07D	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230745	9	Equipment	2-Butanone	Initial Calibration Verification	>35%		nondirectional	ND<5.0 ug/l	
MC1274	1230745	9	Equipment	Bromomethane	Laboratory Control Sample	50%		low	ND<2.0 ug/l	
MC1274	1230745	9	Equipment	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230745	9	Equipment	Carbon Tetrachloride	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230745	9	Equipment	Chloromethane	Quadratic Regression	-		nondirectional	ND<2.0 ug/l	
MC1274	1230745	9	Equipment	Freon-113	Quadratic Regression	-		nondirectional	ND<5.0 ug/l	

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory:	**Spetrum Analytical**
Project:	**PWCTEH: Northwest GW/SW Study**
Commission #	**88UT922.001**
SDG:	**MC1274**
Date Samples Collected	**6/21/2011**
RCP Certification Form Included:	**Yes**
Laboratory Case Narrative Included:	**Yes**

Detects: Potential Constituents of Concern (detected) in this SDG:	**See bold below**	**Bold**
REPORTING LIMITS CHECKED FOR THE FOLLOWING REGULATORY CRITERIA LISTS:	RVC, IVC, SWPC	RVC, IVC, SWPC
RL exceeded for Regulatory Criteria		None

Note 1: **Bias High: reported result may be lower, RLs are accepted as reported.**
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R or Method Blank Contamination	RPD	BIAS	Sample Result	COMMENTS
MC1274	1230745	9	Equipment	Methyl tert butyl ether	Quadratic Regression	-		nondirectional	ND<1.0 ug/l	
MC1274	1230745	9	Equipment	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	194%		high	ND<5.0 ug/l	
MC1274	1230745	9	Equipment	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230746	11	Trip Blank	1,2,3-trichloropropane	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230746	11	Trip Blank	Bromomethane	Laboratory Control Sample	52%		low	ND<2.0 ug/l	
MC1274	1230746	11	Trip Blank	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230746	11	Trip Blank	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	182%		high	ND<5.0 ug/l	
MC1274	1230746	11	Trip Blank	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230747	21	WT-MW-50	1,2,3-trichloropropane	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230747	21	WT-MW-50	Bromomethane	Laboratory Control Sample	52%		low	ND<2.0 ug/l	
MC1274	1230747	21	WT-MW-50	Bromomethane	Continuing Calibration Check	>30%		nondirectional	ND<2.0 ug/l	
MC1274	1230747	21	WT-MW-50	Trans-1,4-dichloro-2-butene	Laboratory Control Sample	182%		high	ND<5.0 ug/l	
MC1274	1230747	21	WT-MW-50	Trans-1,4-dichloro-2-butene	Continuing Calibration Check	>30%		nondirectional	ND<5.0 ug/l	
MC1274	1230736uf	2	WT-MW-59	No QC Issues						
MC1274	1230737uf	4	WT-MW-58	No QC Issues						
MC1274	1230738uf	6	WT-MW-50	No QC Issues						
MC1274	1230739uf	8	WT-MW-19SR	No QC Issues						
MC1274	1230740uf	13	WT-MW-21I	No QC Issues						
MC1274	1230741uf	15	WT-MW-21S	No QC Issues						
MC1274	1230742uf	17	WT-MW-07S	No QC Issues						
MC1274	1230743uf	19	WT-MW-07D	No QC Issues						
MC1274	1230744uf	20	WT-MW-21S	No QC Issues						
MC1274	1230745uf	10	Equipment	No QC Issues						

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Accutest
Project: P&W East Hartford: Willow Pond Semi-Annual Groundwater Monitoring
Commission # 88UT059.001
SDG: MC4052
Date Samples Collected 9/28/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

Note 1: Bias High: reported result may be lower, RLs are accepted as reported.
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC PARAMETER	QC OUTLIER (%R / %D / RPD / RSD) Blank Contamination	BIAS	COMMENTS
MC4052	1241015	-10	WT-MW-44	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241015	-10	WT-MW-44	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241015	-10	WT-MW-44	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241015	-10	WT-MW-44	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241016	-12	WT-MW-50	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241016	-12	WT-MW-50	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241016	-12	WT-MW-50	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241016	-12	WT-MW-50	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241017	-14	WT-MW-58	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241017	-14	WT-MW-58	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241017	-14	WT-MW-58	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241017	-14	WT-MW-58	cis-1,2-Dichloroethene	MS/MSD	4% / -14%	VERY Low	%R <10% - Data my be unusable
MC4052	1241017	-14	WT-MW-58	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241019	-1	WT-MW-42	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241019	-1	WT-MW-42	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241019	-1	WT-MW-42	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241019	-1	WT-MW-42	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241020	-3	WT-MW-40	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241020	-3	WT-MW-40	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241020	-3	WT-MW-40	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241020	-3	WT-MW-40	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241021	-5	WT-MW-19I	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241028	-9	TRIP BLANK	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241028	-9	TRIP BLANK	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241028	-9	TRIP BLANK	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241028	-9	TRIP BLANK	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241029	-7	EQUIPMENT	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241029	-7	EQUIPMENT	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241029	-7	EQUIPMENT	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241029	-7	EQUIPMENT	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241030	-16	WT-MW-50	1,2,3-Trichlorobenzene	MS/MSD	66%	Low	
MC4052	1241030	-16	WT-MW-50	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241030	-16	WT-MW-50	2-Butanone (MEK)	MS/MSD	56% / 69%	Low	
MC4052	1241030	-16	WT-MW-50	2-Hexanone	MS/MSD	54% / 57%	Low	
MC4052	1241030	-16	WT-MW-50	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241030	-16	WT-MW-50	Acetone	MS/MSD	42% / 46%	Low	
MC4052	1241030	-16	WT-MW-50	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4052	1241030	-16	WT-MW-50	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4052	1241030	-16	WT-MW-50	Naphthalene	MS/MSD	68%	Low	

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Accutest
Project: P&W East Hartford: Willow Pond Semi-Annual Groundwater Monitoring
Commission # 88UT059.001
SDG: MC4052
Date Samples Collected 9/28/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

Note 1: Bias High: reported result may be lower, RLs are accepted as reported.
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC PARAMETER	QC OUTLIER (%R / %D / RPD / RSD) Blank Contamination	BIAS	COMMENTS
MC4052	1241030	-16	WT-MW-50	Trans-1,4-Dichloro-2-Butene	MS/MSD	63% / 66%	Low	
MC4052	1241030	-16	WT-MW-50	Trichloroethene	MS/MSD	64% / 59%	Low	
MC4052	1241015uf	-11	WT-MW-44	No QC Issues				
MC4052	1241016uf	-13	WT-MW-50	No QC Issues				
MC4052	1241017uf	-15	WT-MW-58	No QC Issues				
MC4052	1241019uf	-2	WT-MW-42	No QC Issues				
MC4052	1241020uf	-4	WT-MW-40	No QC Issues				
MC4052	1241021uf	-6	WT-MW-19I	No QC Issues				
MC4052	1241029uf	-8	EUIPMENT	No QC Issues				
MC4052	1241030uf	-17	WT-MW-50	No QC Issues				

CT DEP Reasonable Confidence Protocol - Data Quality Assessment Worksheet

Laboratory: Accutest
Project: P&W East Hartford: Willow Pond Semi-Annual Groundwater Monitoring
Commission # 88UT059.001
SDG: MC4100
Date Samples Collected 9/28/2011-9/29/2011
RCP Certification Form Included: Yes
Laboratory Case Narrative Included: Yes

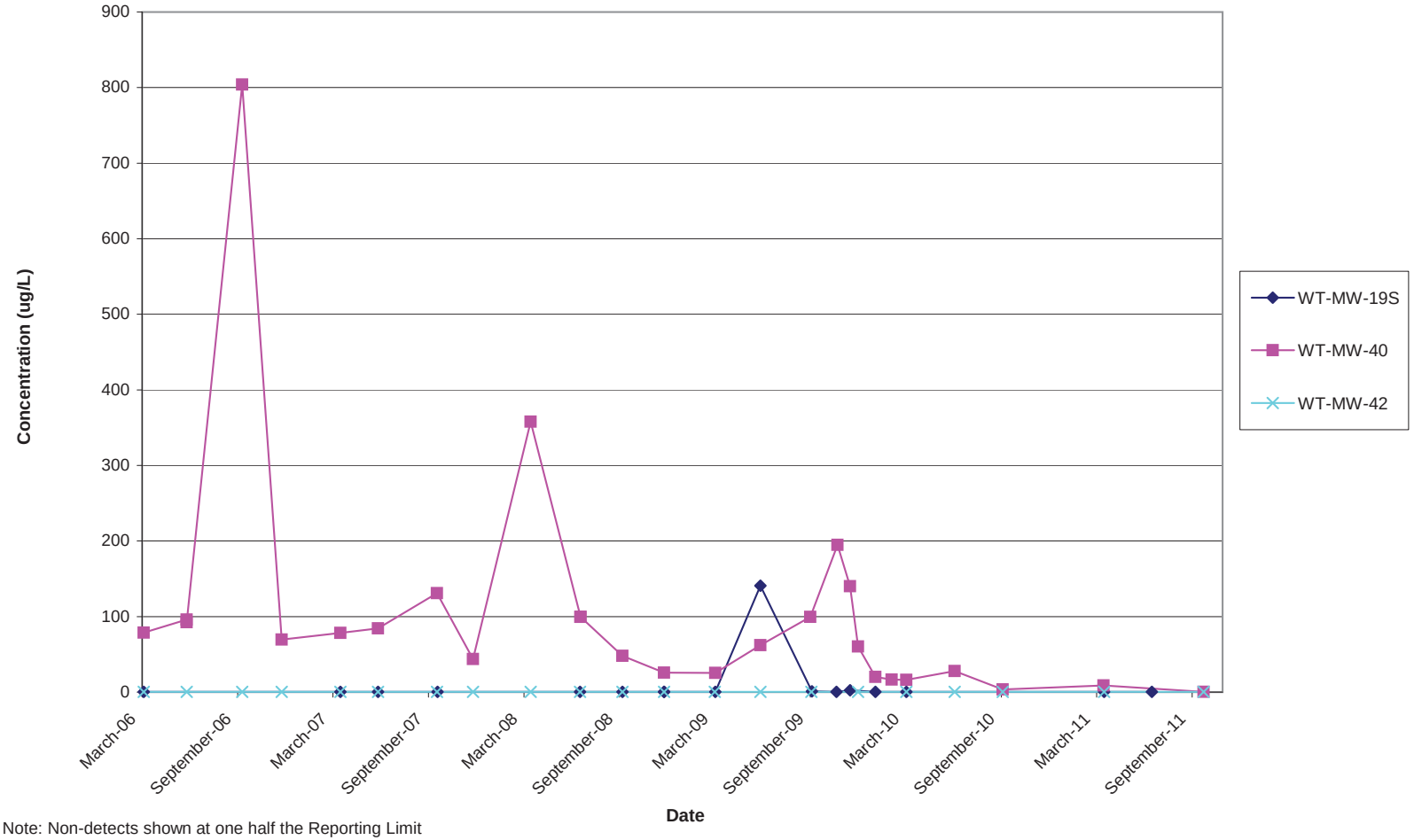
Note 1: Bias High: reported result may be lower, RLs are accepted as reported.
Bias Low: reported result may be higher, RLs may be higher

SDG	SAMPLE #	Lab #	Location ID	COMPOUND	QC PARAMETER	QC OUTLIER (%R / %D / RPD / RSD) Blank Contamination	BIAS	COMMENTS
MC4100	1241018	-1	WT-MW-46	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241018	-1	WT-MW-46	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241018	-1	WT-MW-46	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241018	-1	WT-MW-46	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241022	-3	WT-MW-57	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241022	-3	WT-MW-57	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241022	-3	WT-MW-57	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241022	-3	WT-MW-57	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241023	-5	WT-MW-59	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241023	-5	WT-MW-59	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241023	-5	WT-MW-59	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241023	-5	WT-MW-59	All PCBs	Surrogate Recovery	571%	High	
MC4100	1241023	-5	WT-MW-59	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241024	-7	WT-MW-47	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241024	-7	WT-MW-47	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241024	-7	WT-MW-47	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241024	-7	WT-MW-47	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241024	-7	WT-MW-47	VOCs (Aromatic)	Sample Preservation	pH>2	Low	the pH was >2 at time of analysis, aromatic VOCs may be bias low
MC4100	1241025	-9	WT-MW-48	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241025	-9	WT-MW-48	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241025	-9	WT-MW-48	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241025	-9	WT-MW-48	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241027	-11	TRIP BLANK	2-Butanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241027	-11	TRIP BLANK	2-Hexanone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241027	-11	TRIP BLANK	Acetone	Initial Calibration Std.		non-directional	employed quadratic regression
MC4100	1241027	-11	TRIP BLANK	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241367	-12	PE SAMPLE	Dichlorodifluoromethane	Continuing Calibration Curve		non-directional	>30% Diff
MC4100	1241368	-14	PE SAMPLE	No QC Issues				
MC4100	1241018uf	-2	WT-MW-46	No QC Issues				
MC4100	1241022uf	-4	WT-MW-57	No QC Issues				
MC4100	1241023uf	-6	WT-MW-59	No QC Issues				
MC4100	1241024uf	-8	WT-MW-47	No QC Issues				
MC4100	1241025uf	-10	WT-MW-48	No QC Issues				
MC4100	1241367uf	-13	PE SAMPLE	No QC Issues				

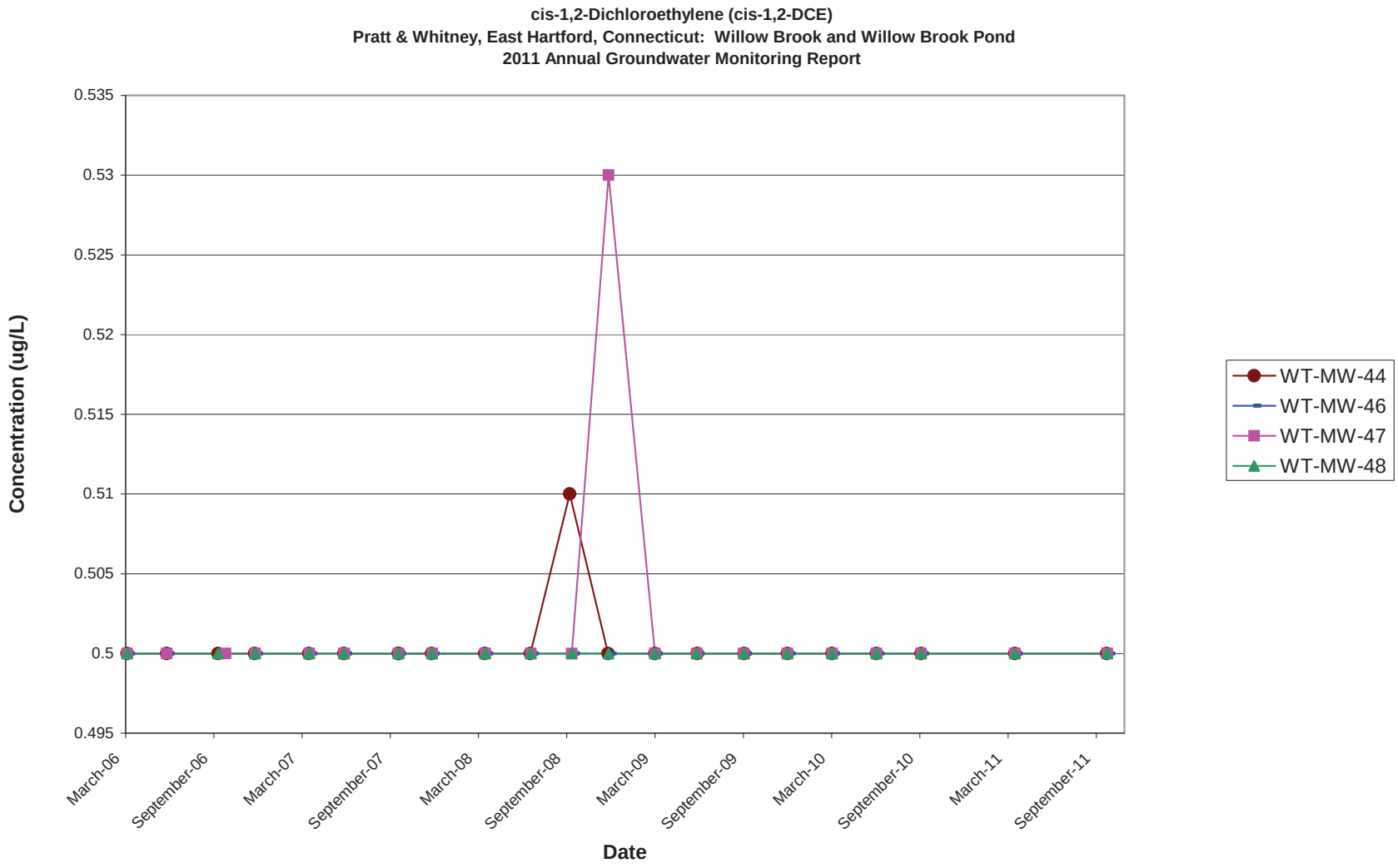
Appendix D

Select Constituent Concentration Graphs

cis-1,2-Dichloroethylene (cis-1,2-DCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

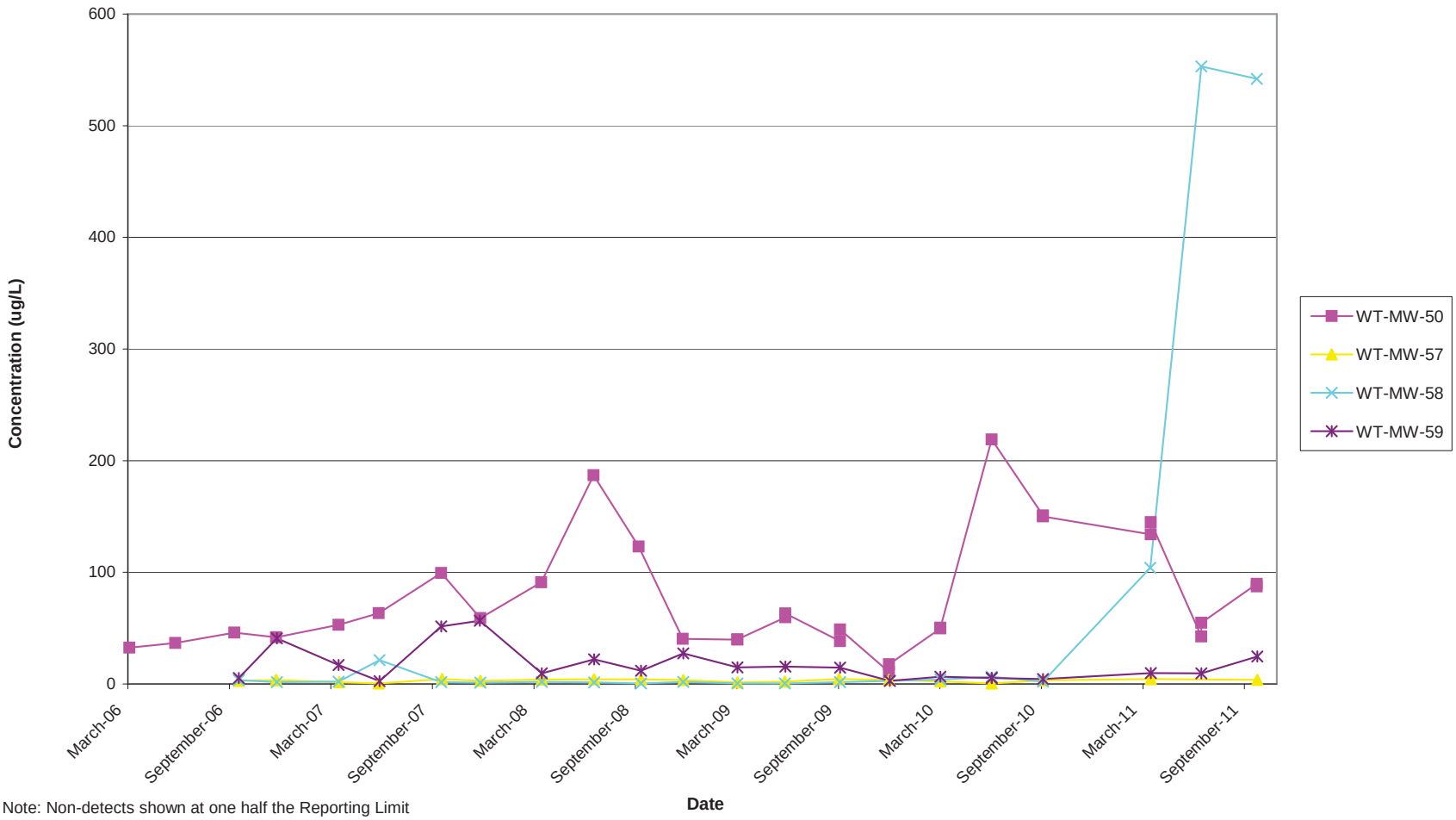


Note: Non-detects shown at one half the Reporting Limit



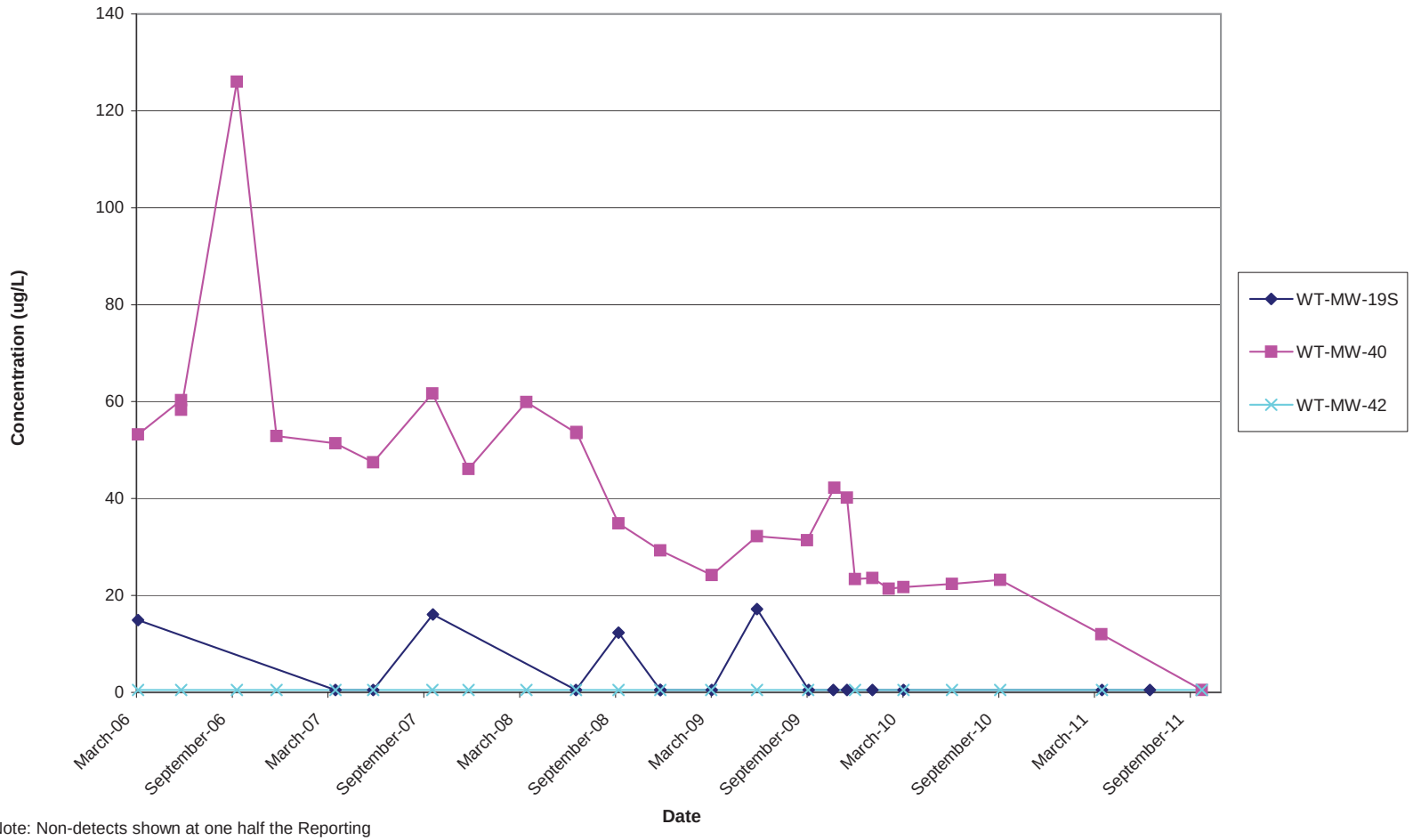
Note: Non-detects shown at one half the Reporting Limit

cis-1,2-Dichlorethylene (cis-1,2-DCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

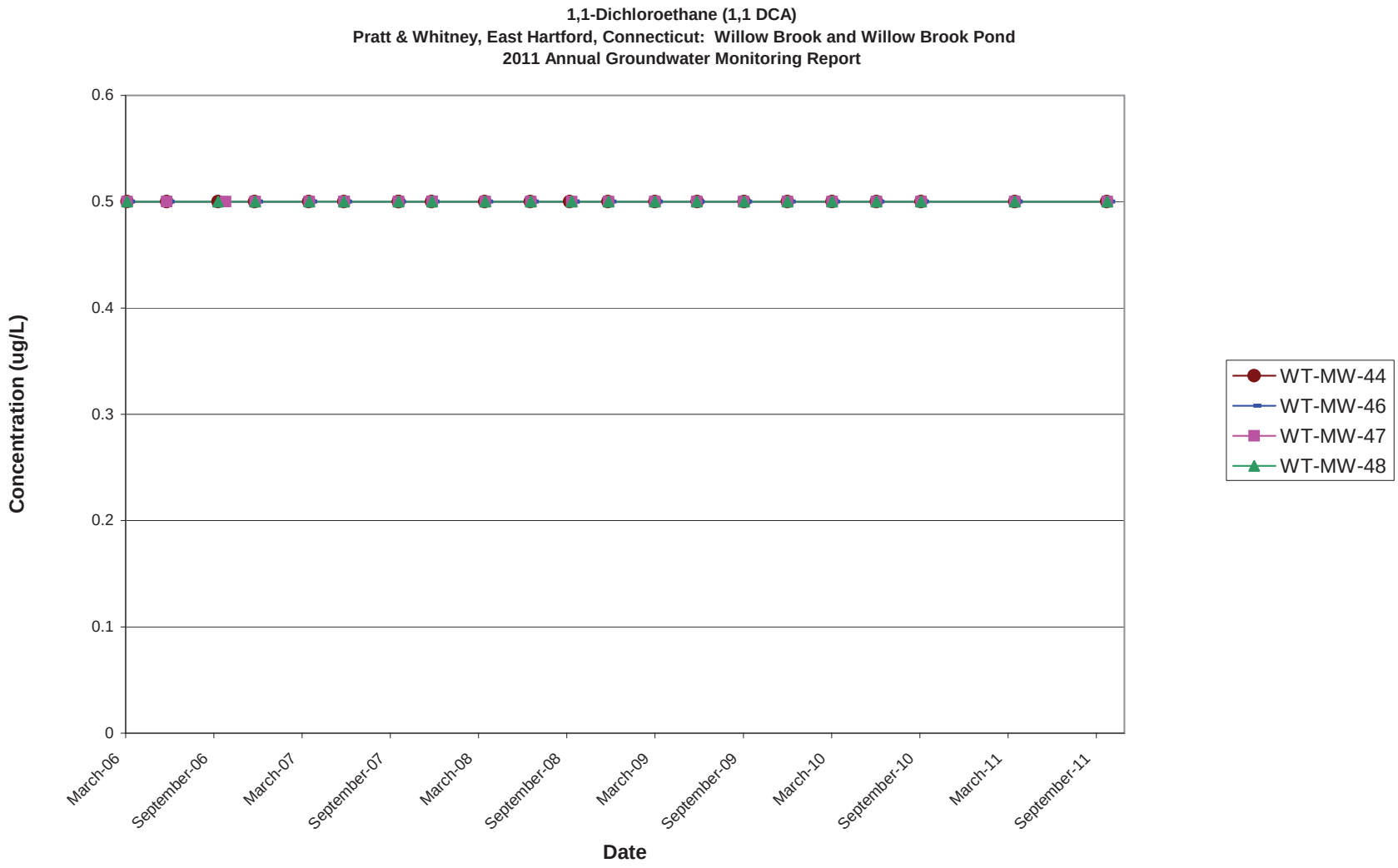


Note: Non-detects shown at one half the Reporting Limit

1,1-Dichloroethane (1,1 DCA)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

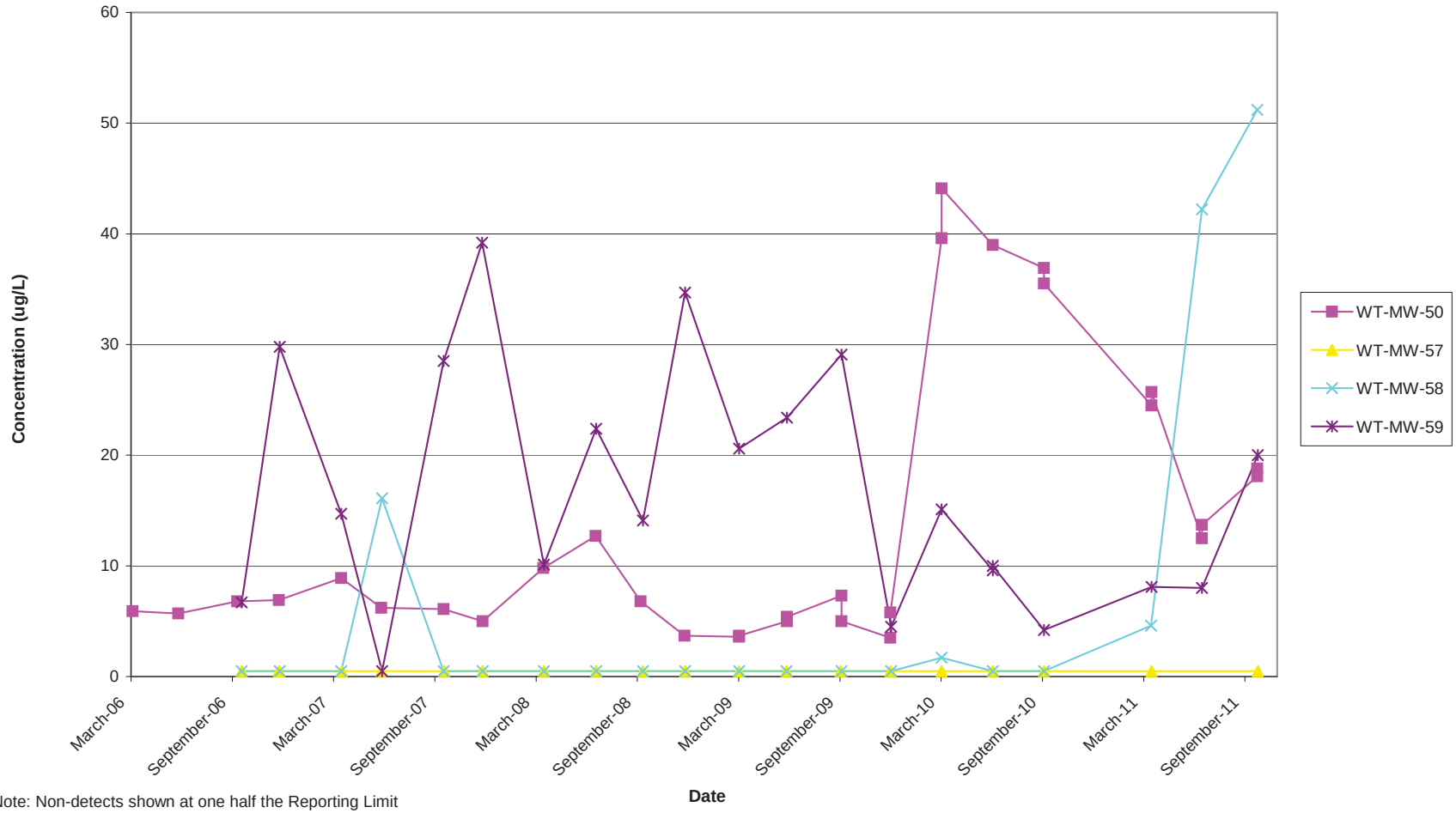


Note: Non-detects shown at one half the Reporting



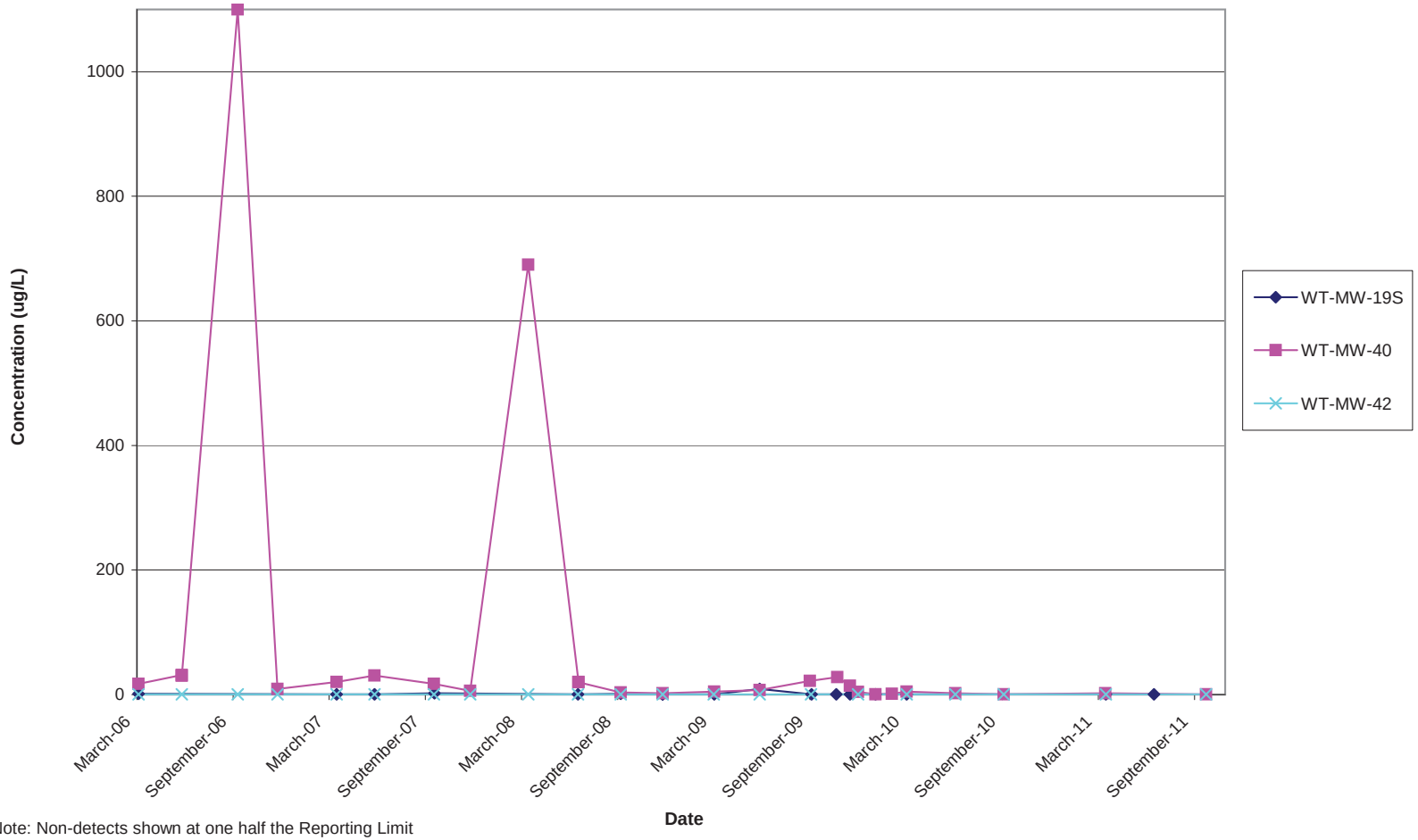
Note: Non-detects shown at one half the Reporting Limit

1,1-Dichloroethane (1,1 DCA)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

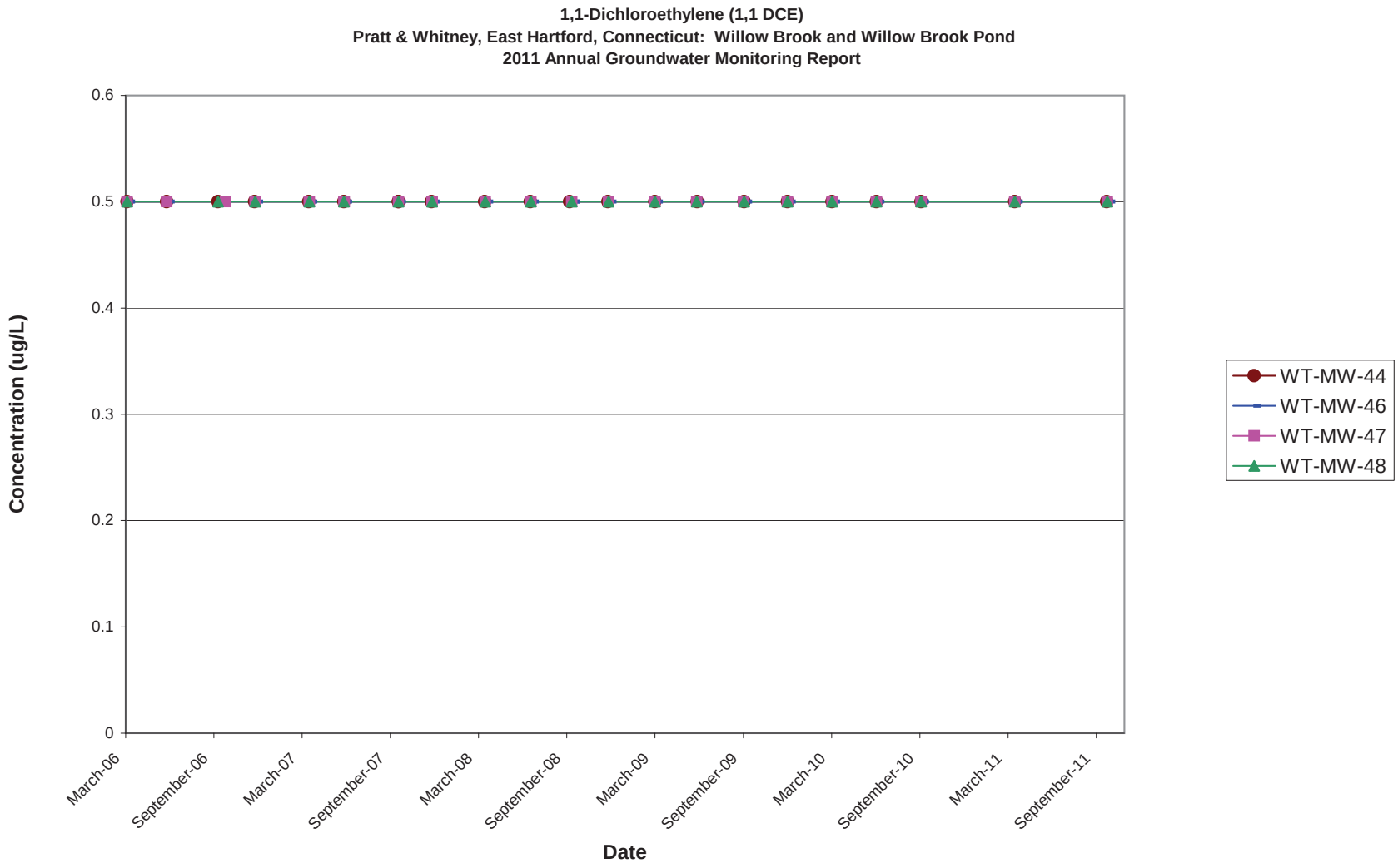


Note: Non-detects shown at one half the Reporting Limit

1,1-Dichloroethylene (1,1 DCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

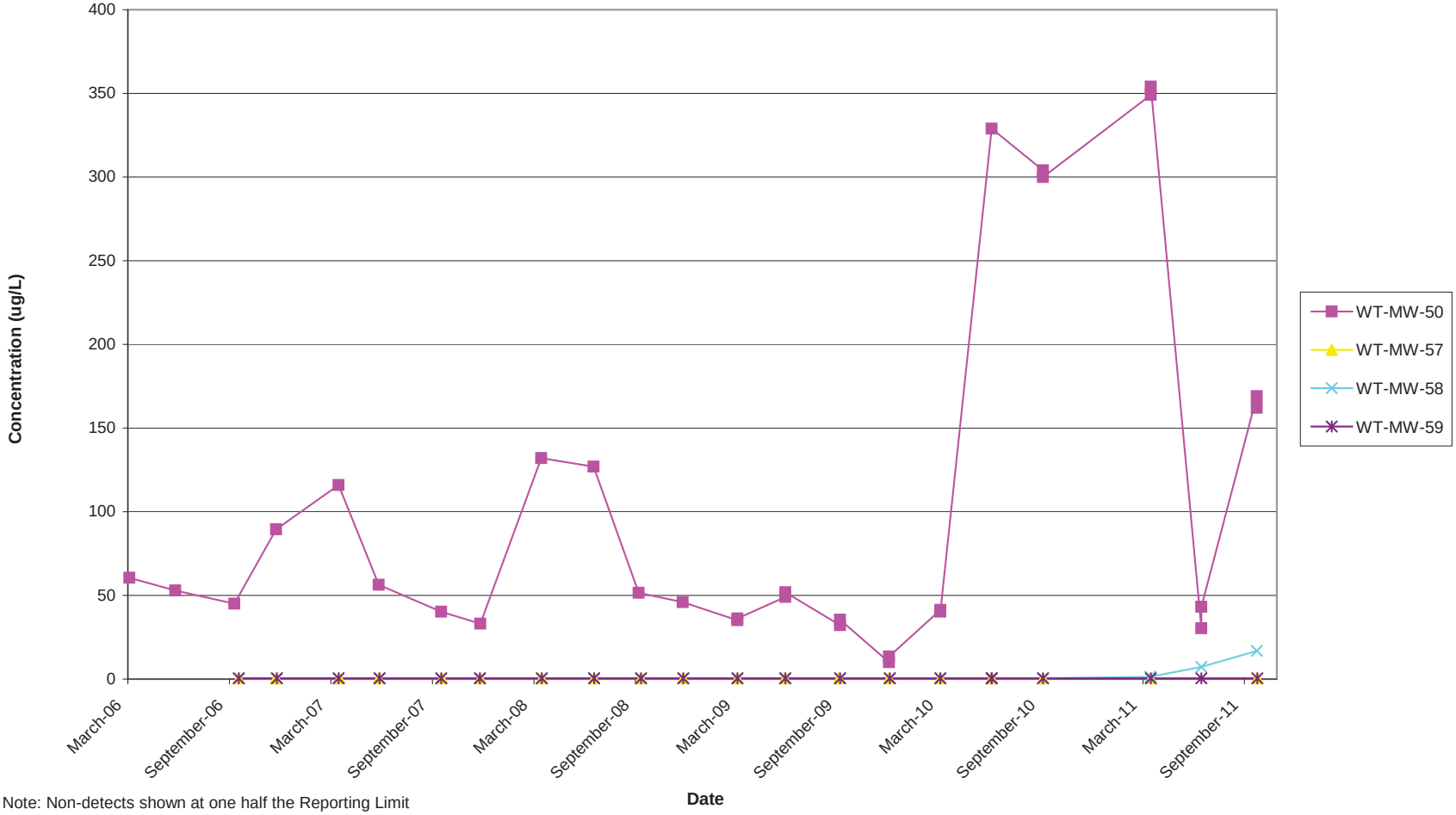


Note: Non-detects shown at one half the Reporting Limit



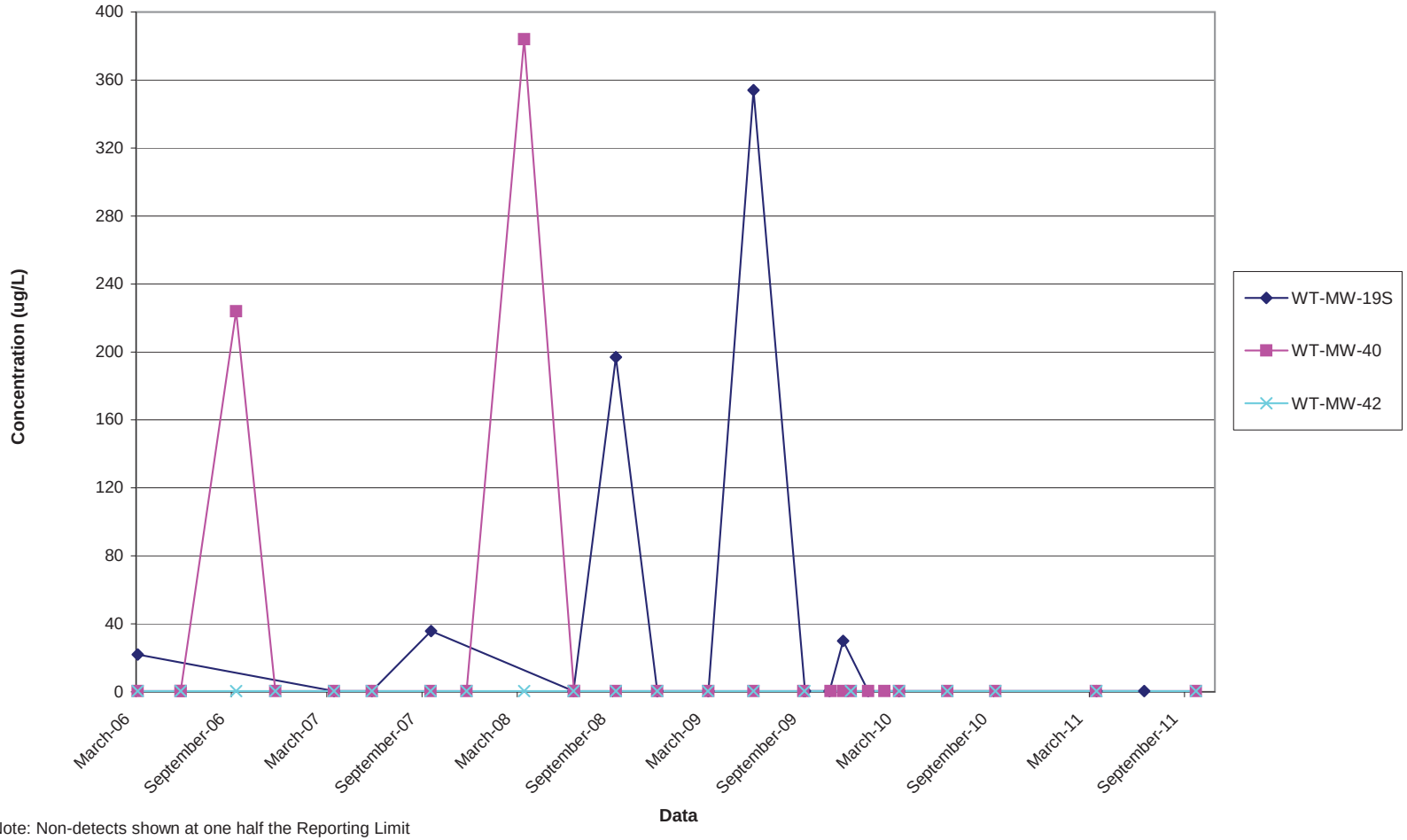
Note: Non-detects shown at one half the Reporting Limit

1,1-Dichloroethylene (1,1 DCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



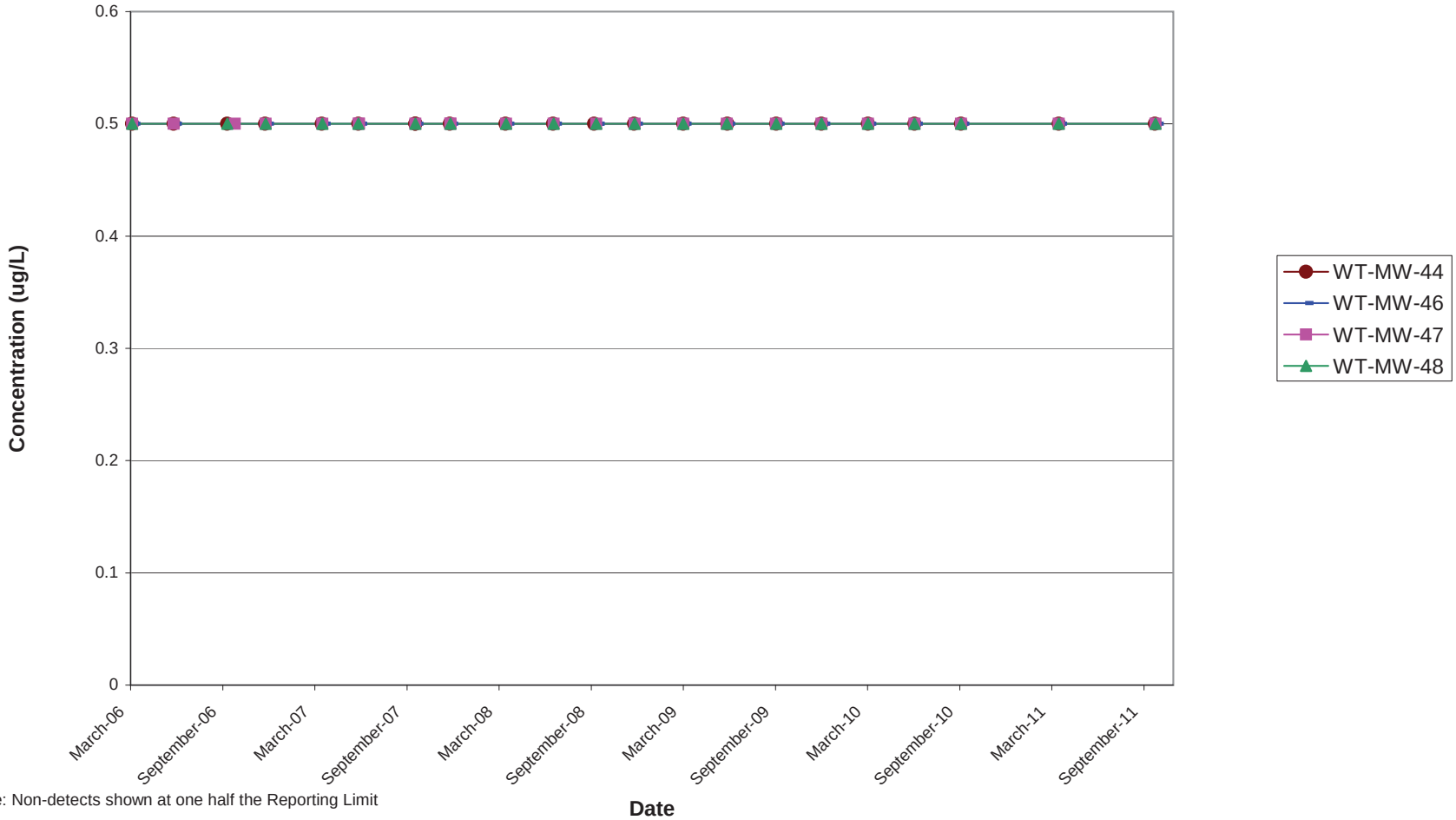
Note: Non-detects shown at one half the Reporting Limit

Tetrachloroethylene (PCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



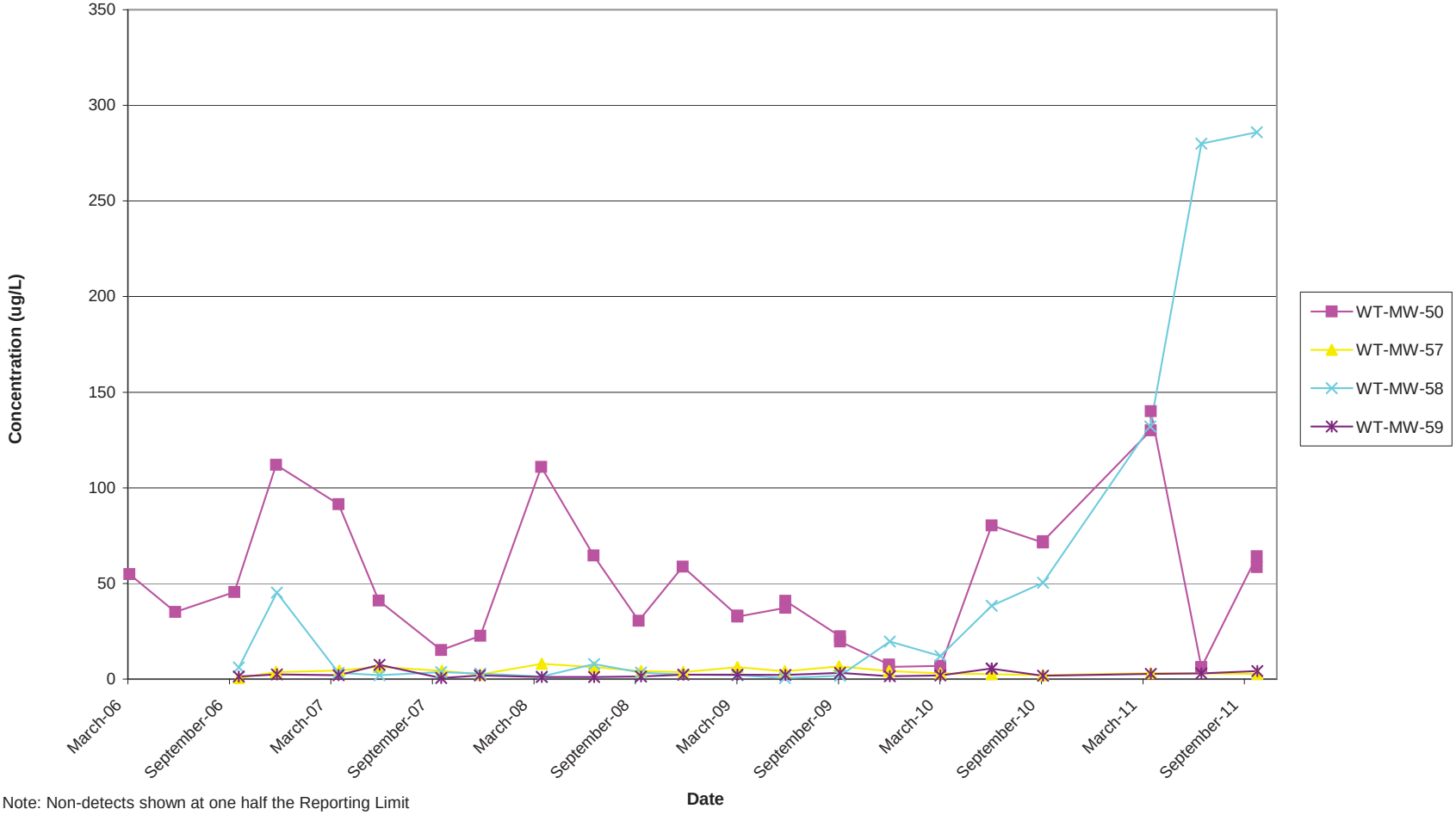
Note: Non-detects shown at one half the Reporting Limit

Tetrachloroethylene (PCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



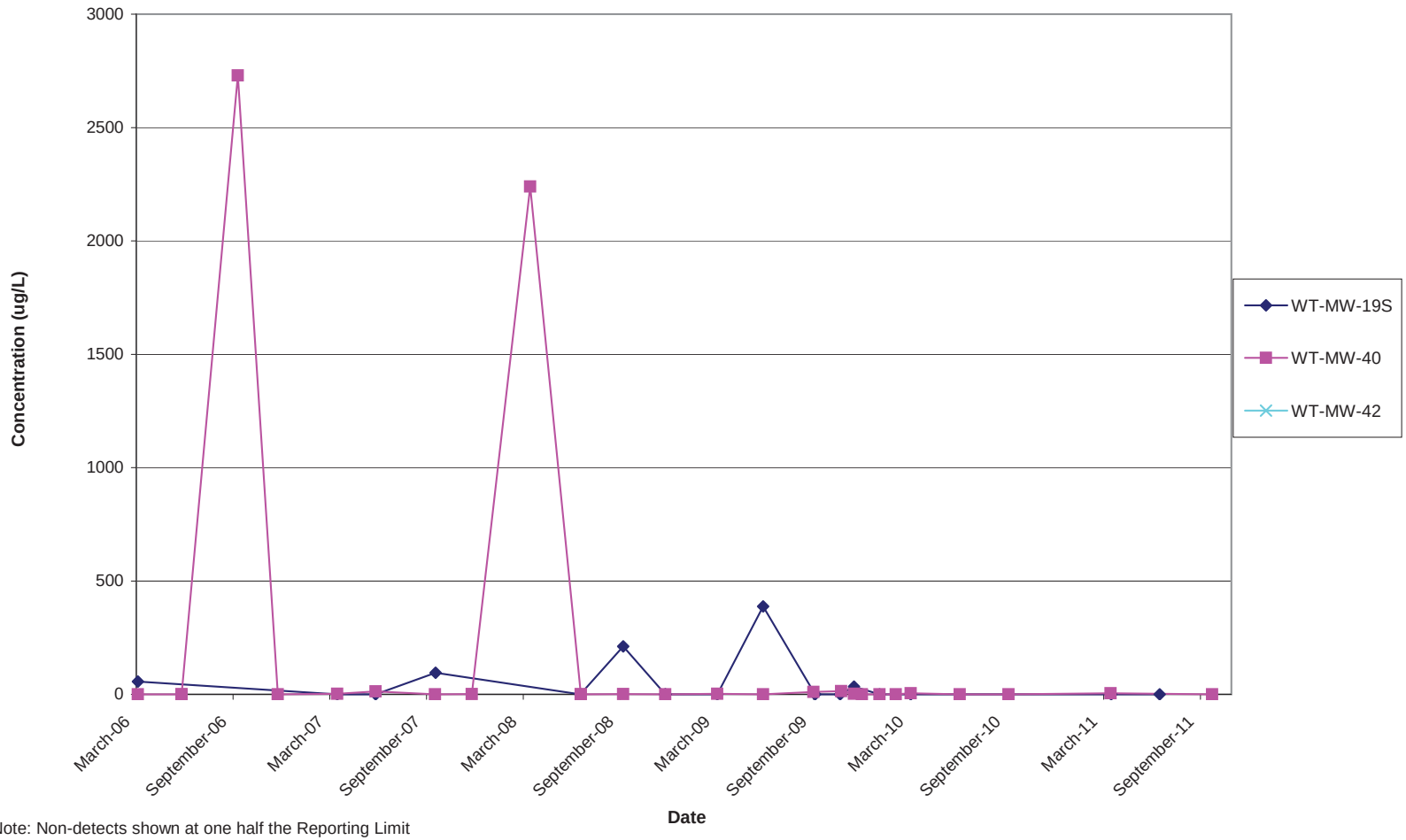
Note: Non-detects shown at one half the Reporting Limit

Tetrachloroethylene (PCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

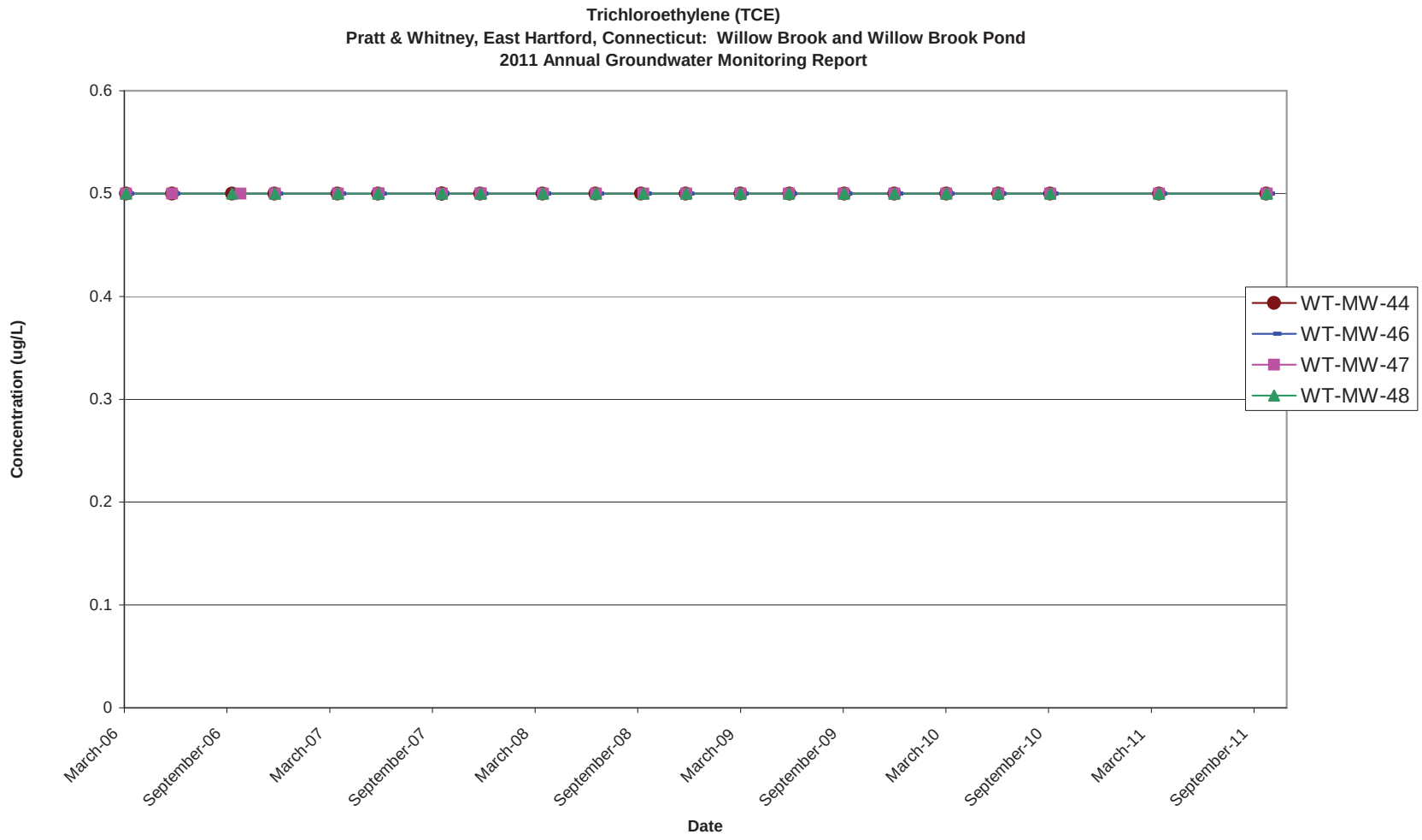


Note: Non-detects shown at one half the Reporting Limit

Trichloroethylene (TCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

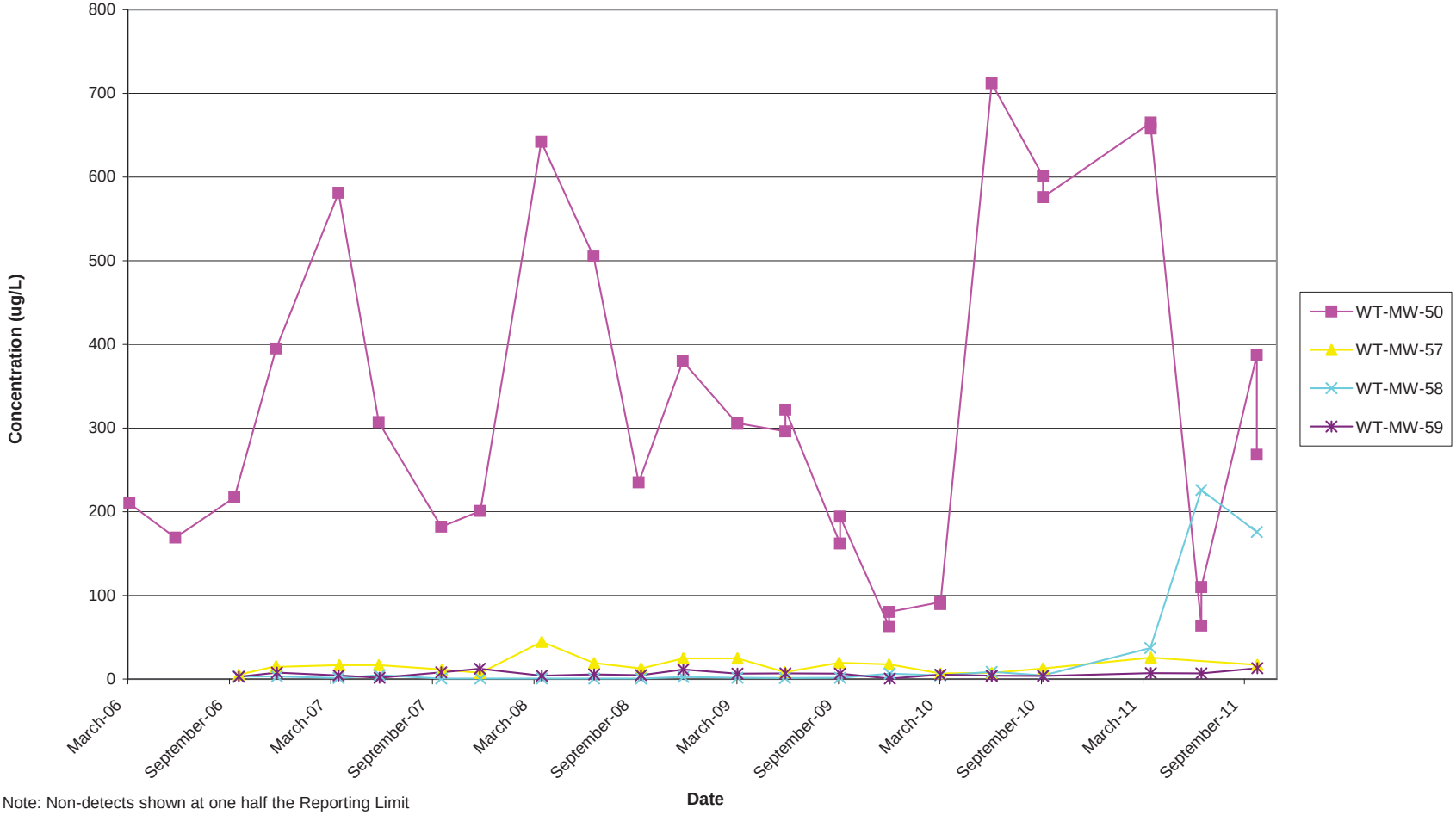


Note: Non-detects shown at one half the Reporting Limit



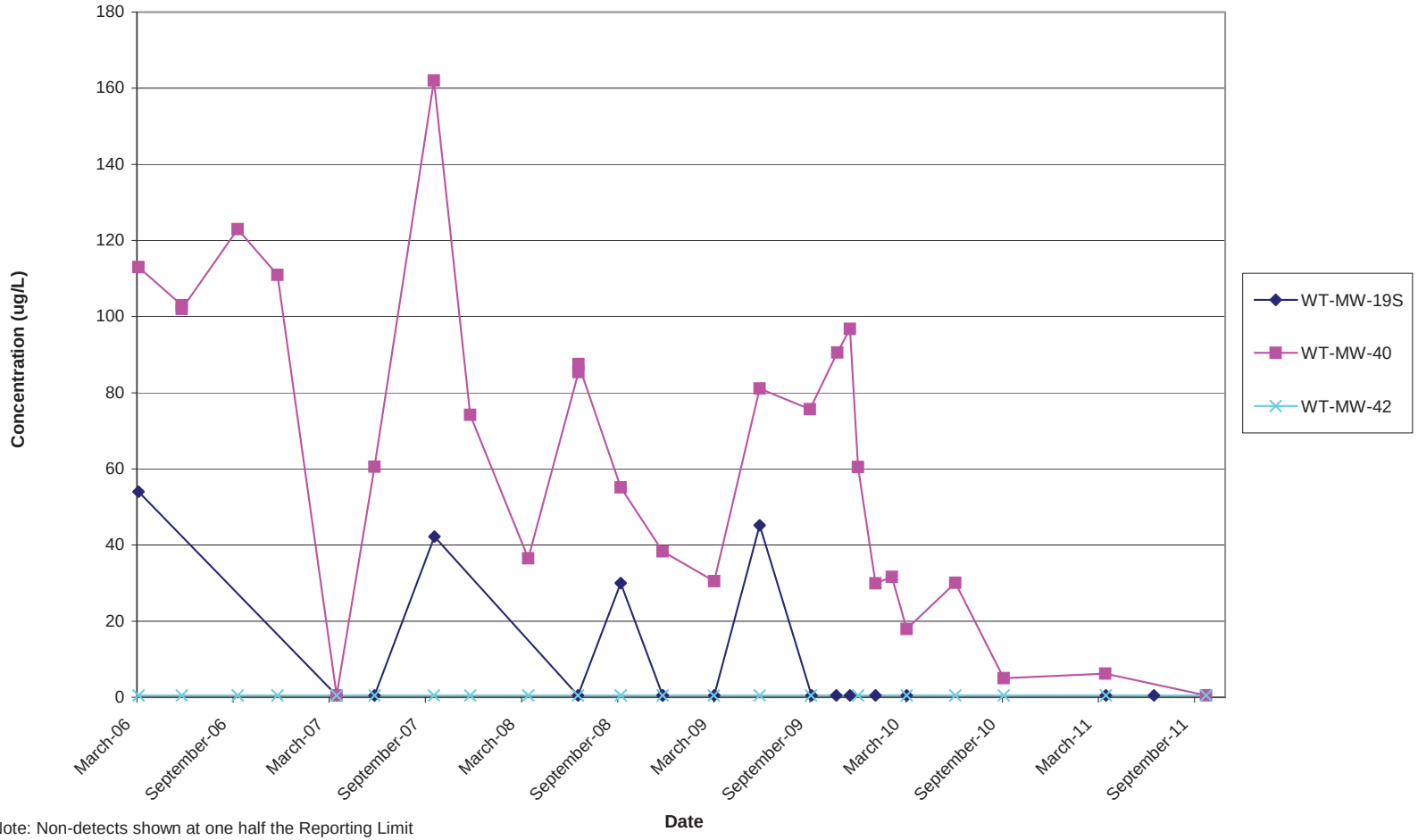
Note: Non-detects shown at one half the Reporting Limit

Trichloroethylene (TCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

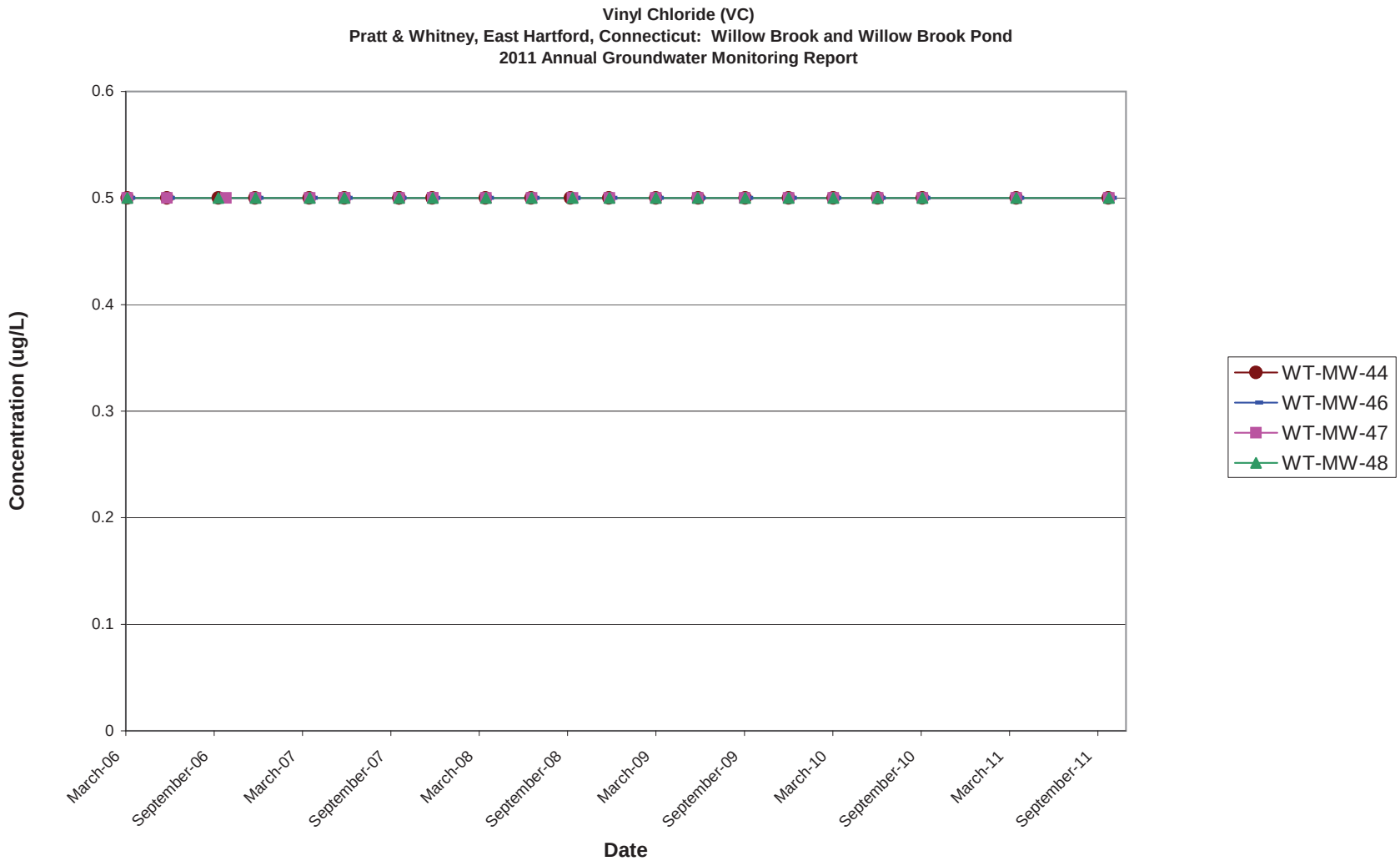


Note: Non-detects shown at one half the Reporting Limit

Vinyl Chloride (VC)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

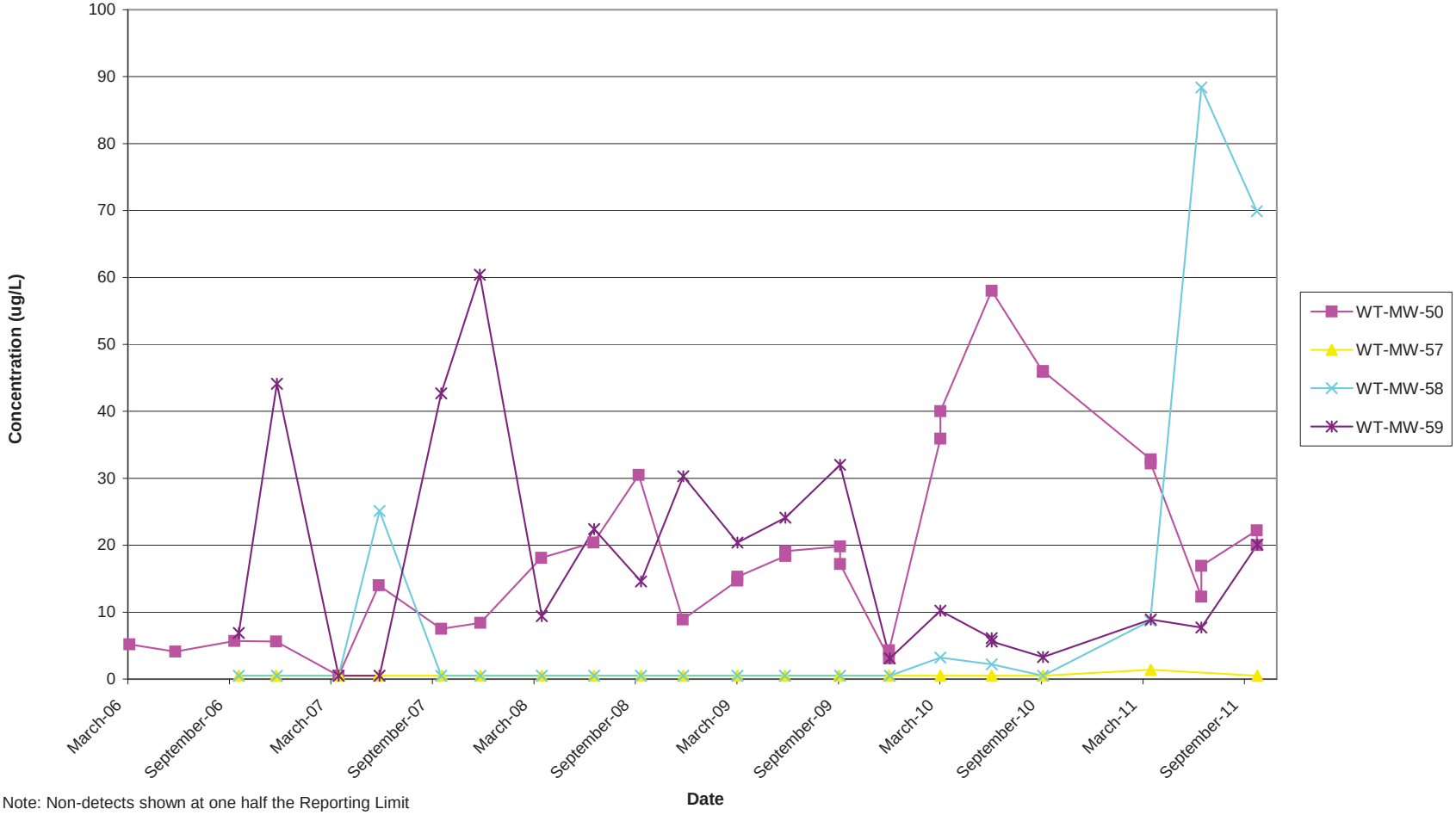


Note: Non-detects shown at one half the Reporting Limit



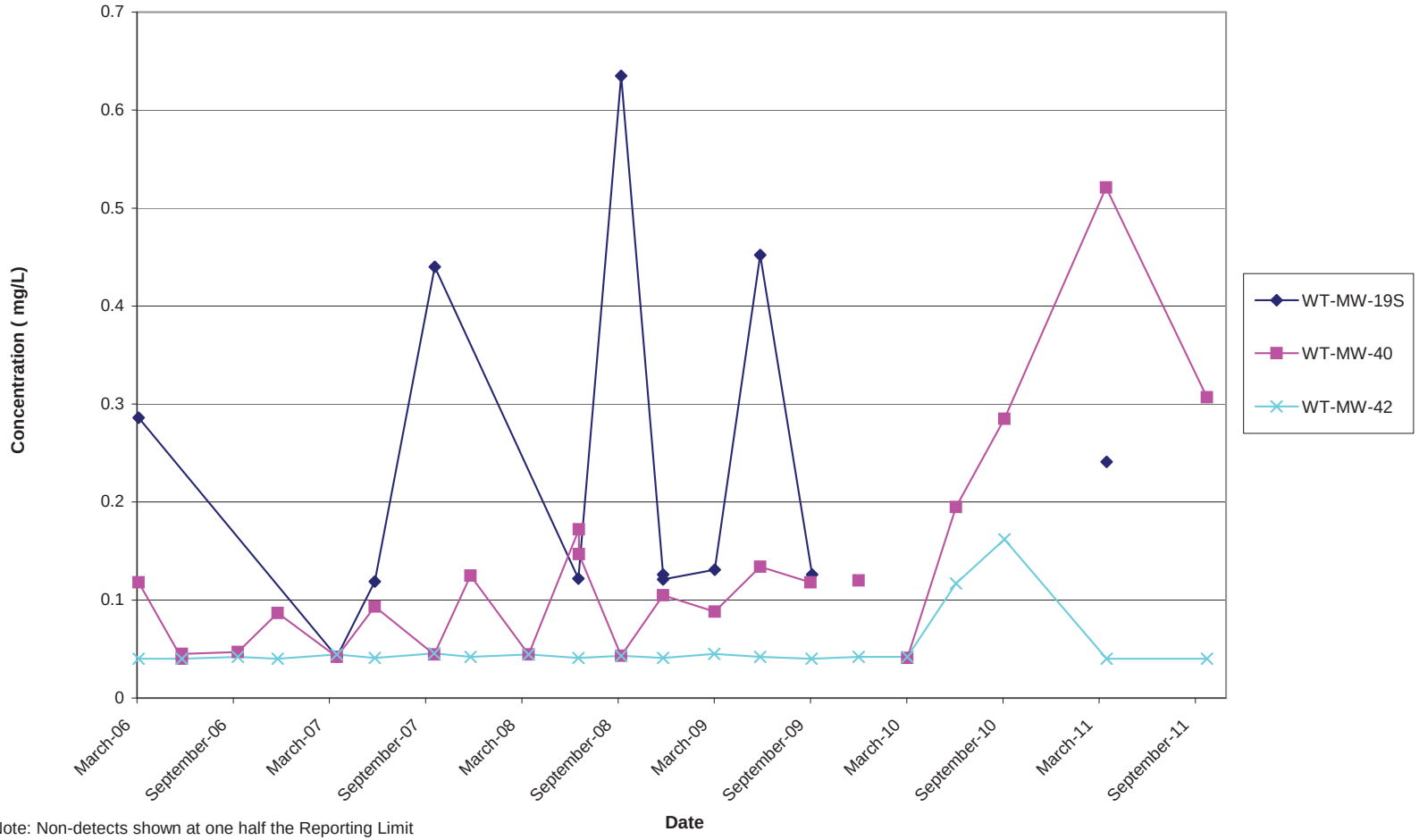
Note: Non-detects shown at one half the Reporting Limit

Vinyl Chloride (VC)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



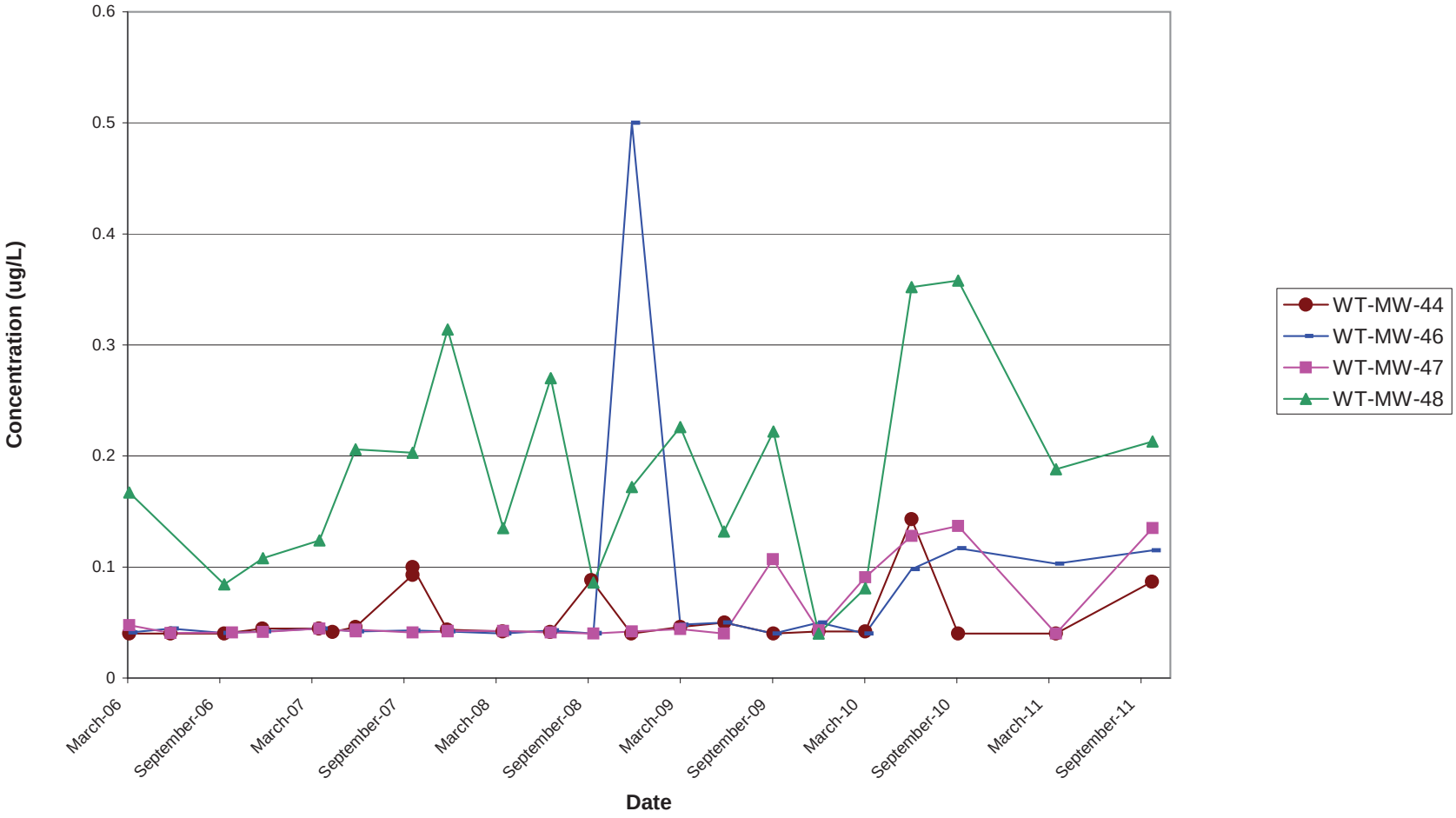
Note: Non-detects shown at one half the Reporting Limit

Total Petroleum Hydrocarbons (ETPH)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



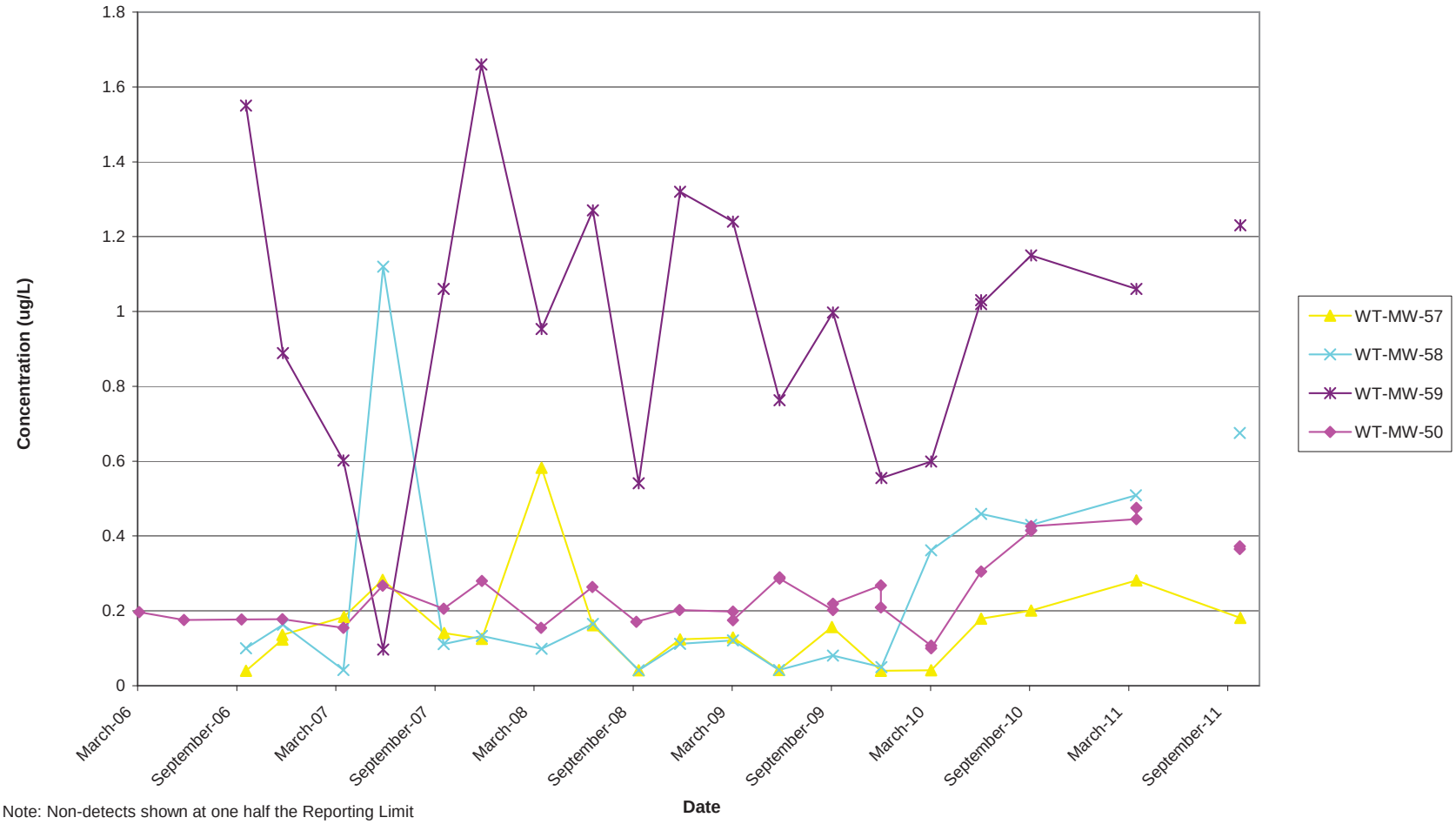
Note: Non-detects shown at one half the Reporting Limit

Total Petroleum Hydrocarbons (ETPH)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



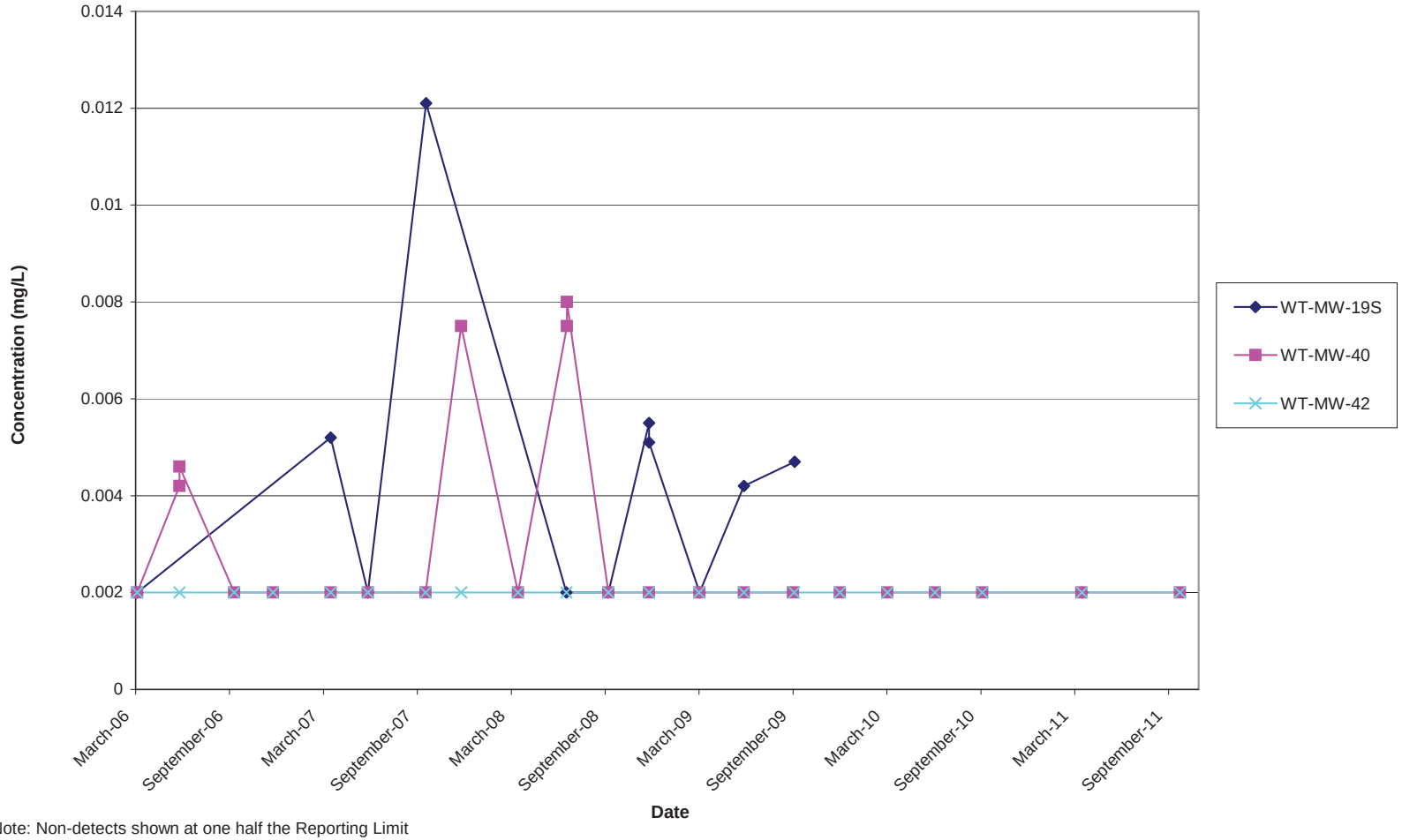
Note: Non-detects shown at one half the Reporting Limit

Total Petroleum Hydrocardons (ETPH)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



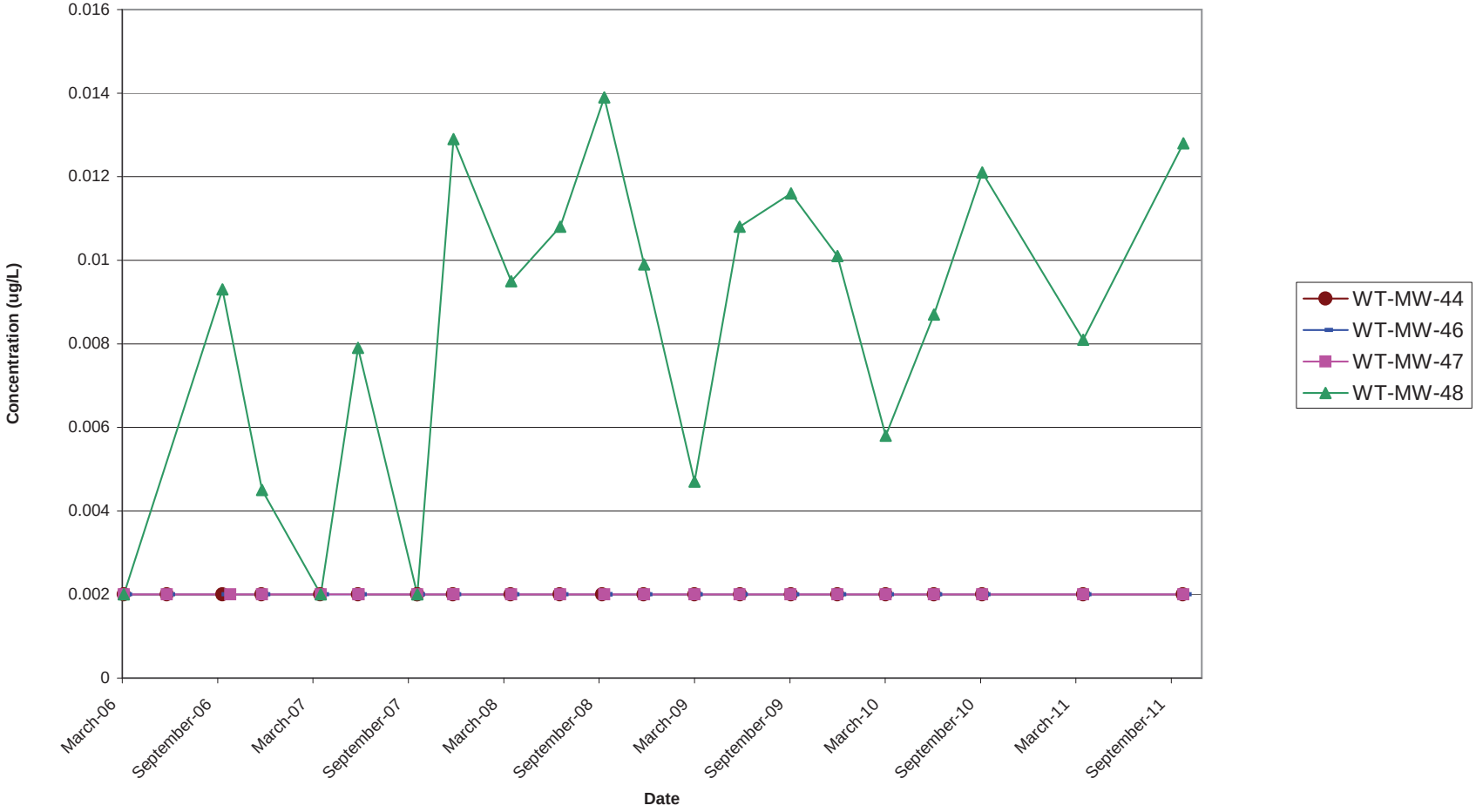
Note: Non-detects shown at one half the Reporting Limit

Arsenic (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



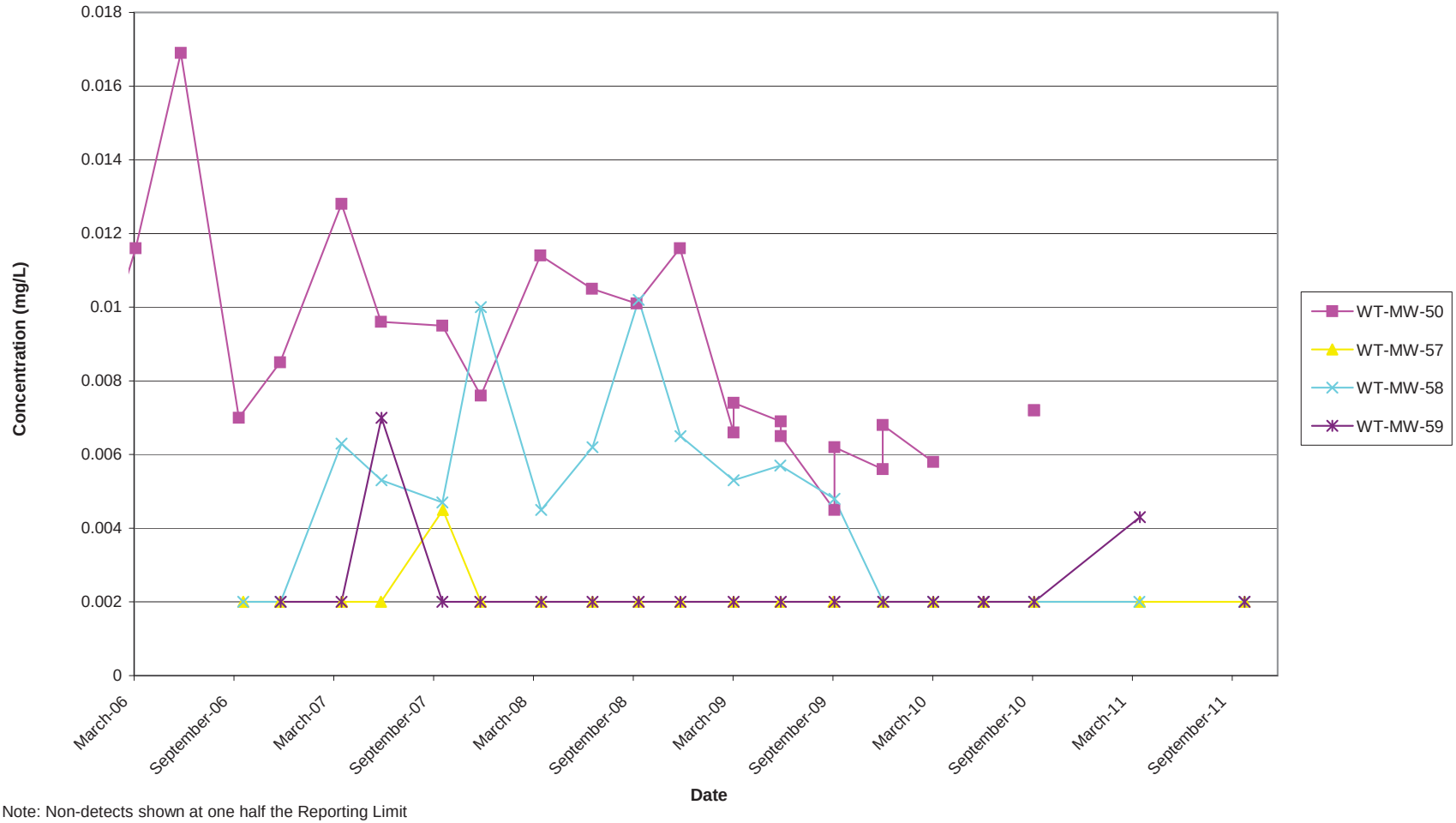
Note: Non-detects shown at one half the Reporting Limit

Arsenic (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



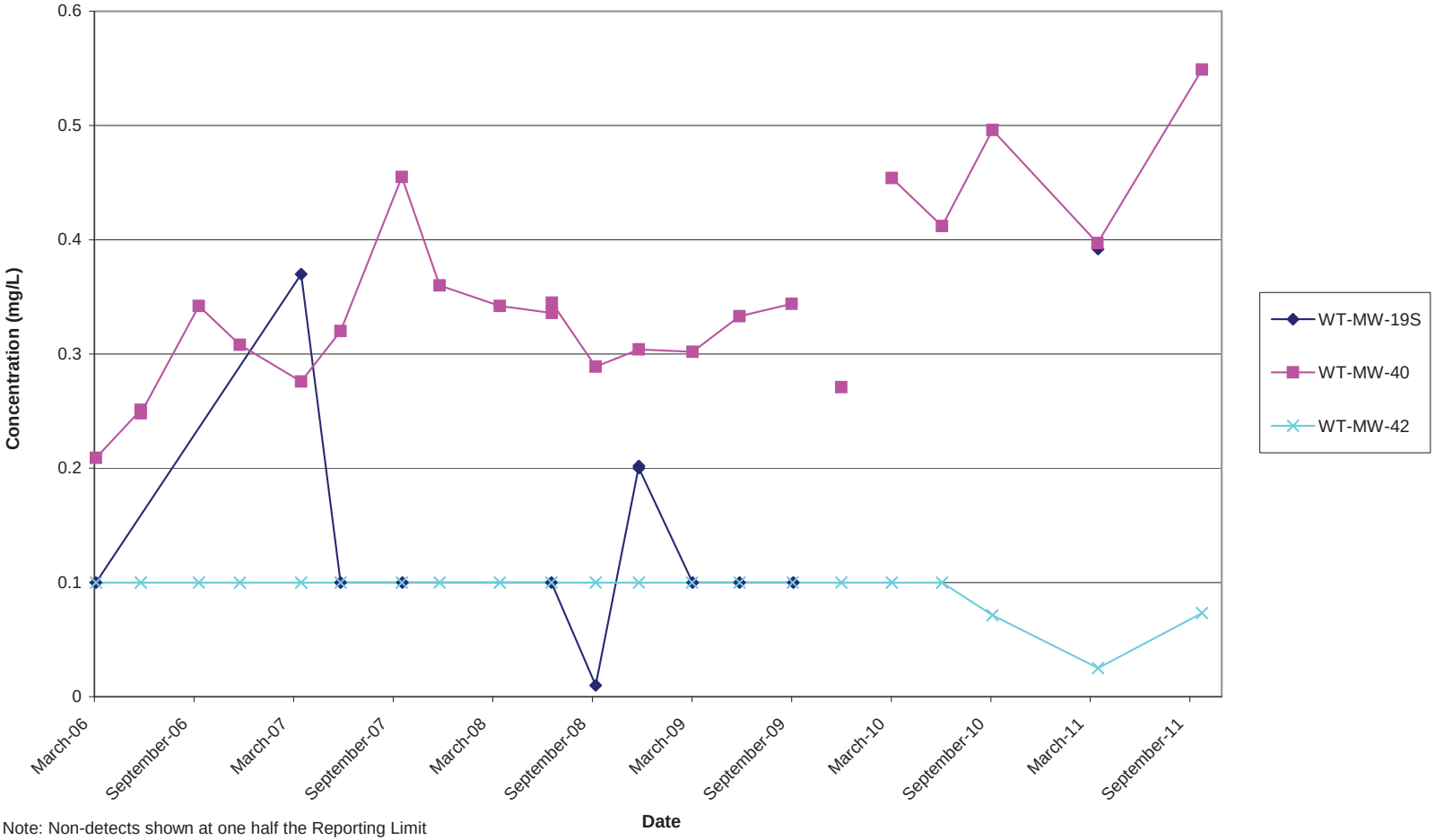
Note: Non-detects shown at one half the Reporting Limit

Arsenic (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2010 Annual Groundwater Monitoring Report

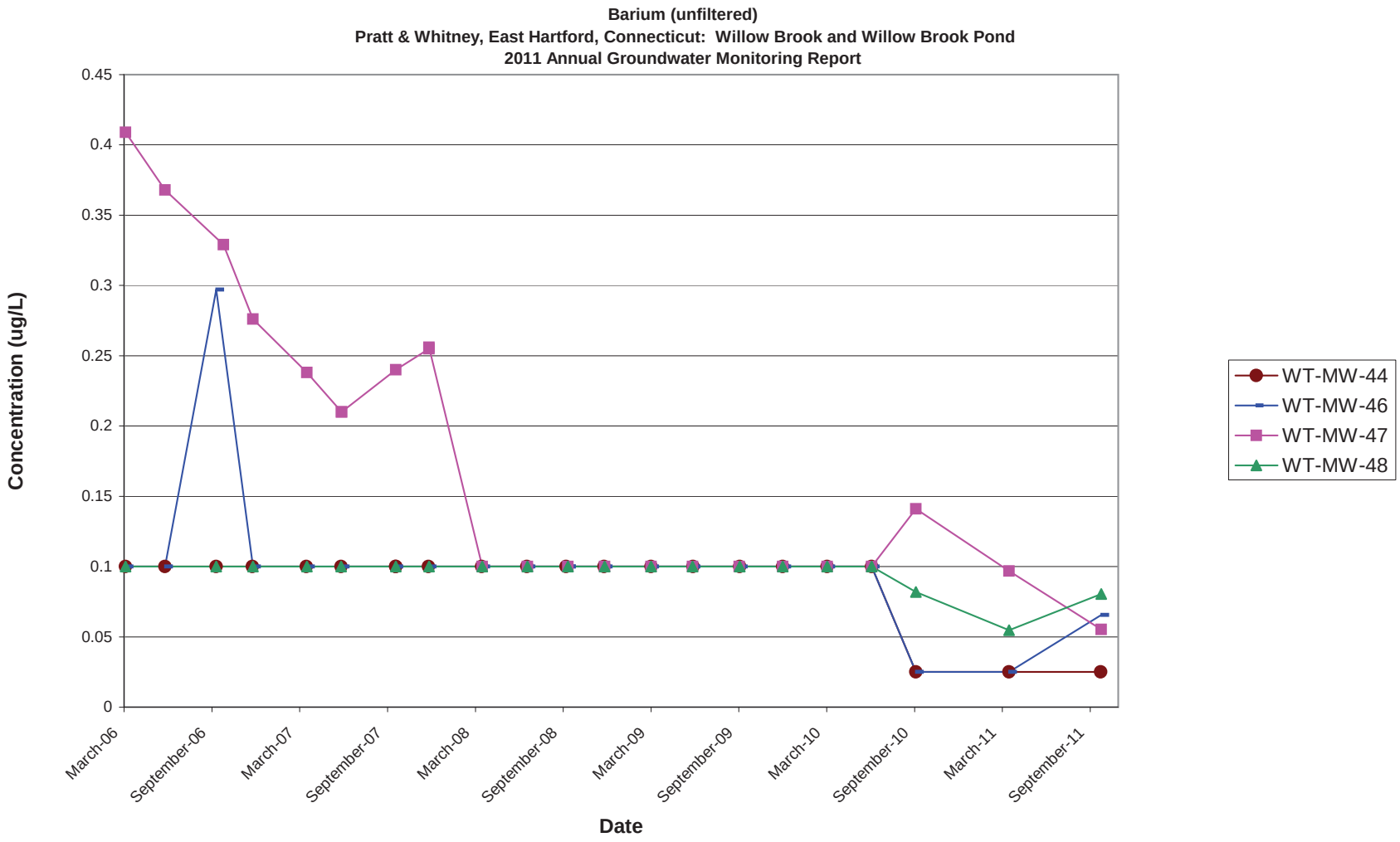


Note: Non-detects shown at one half the Reporting Limit

Barium (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

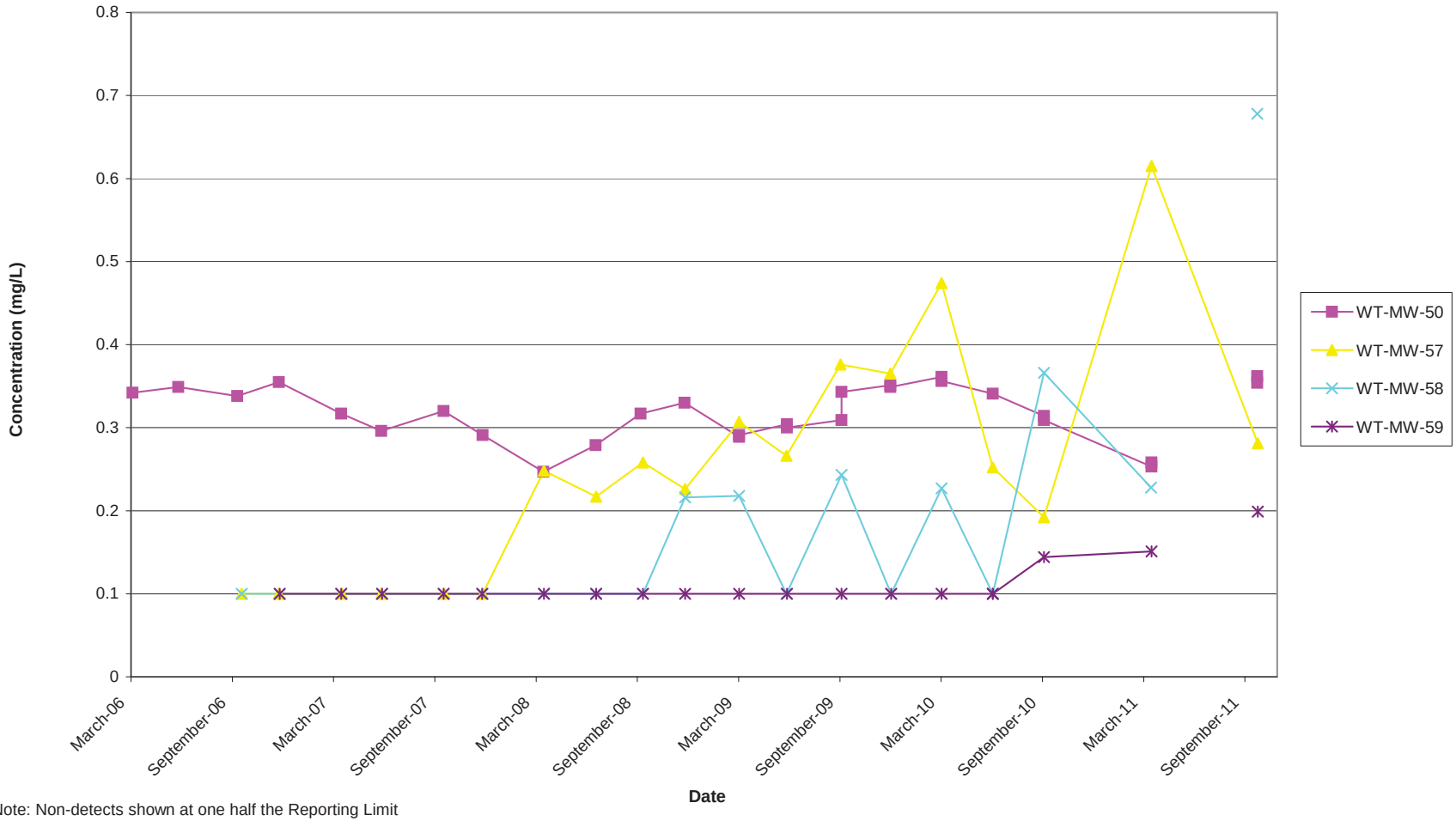


Note: Non-detects shown at one half the Reporting Limit



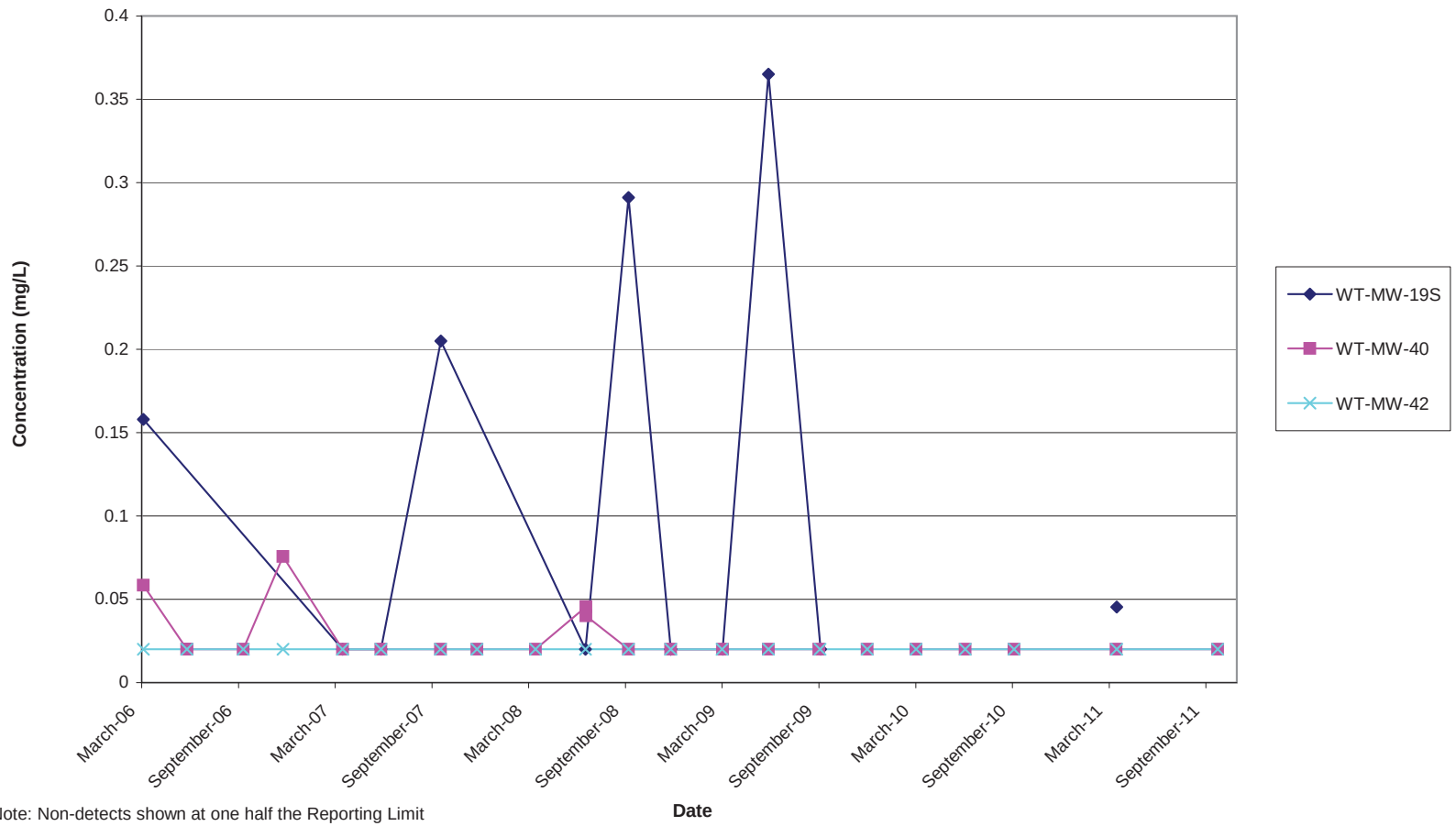
Note: Non-detects shown at one half the Reporting Limit

Barium (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

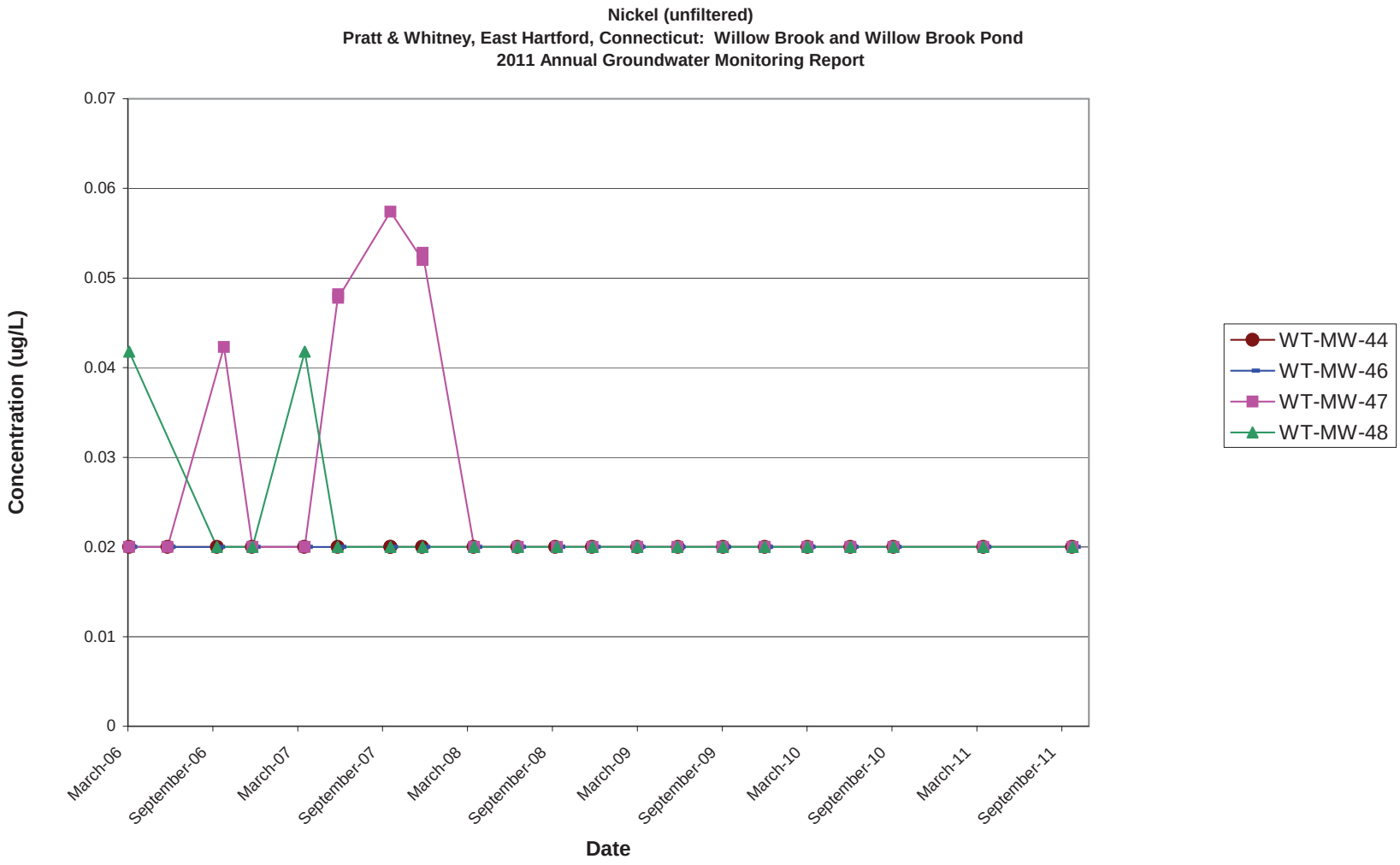


Note: Non-detects shown at one half the Reporting Limit

Nickel (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

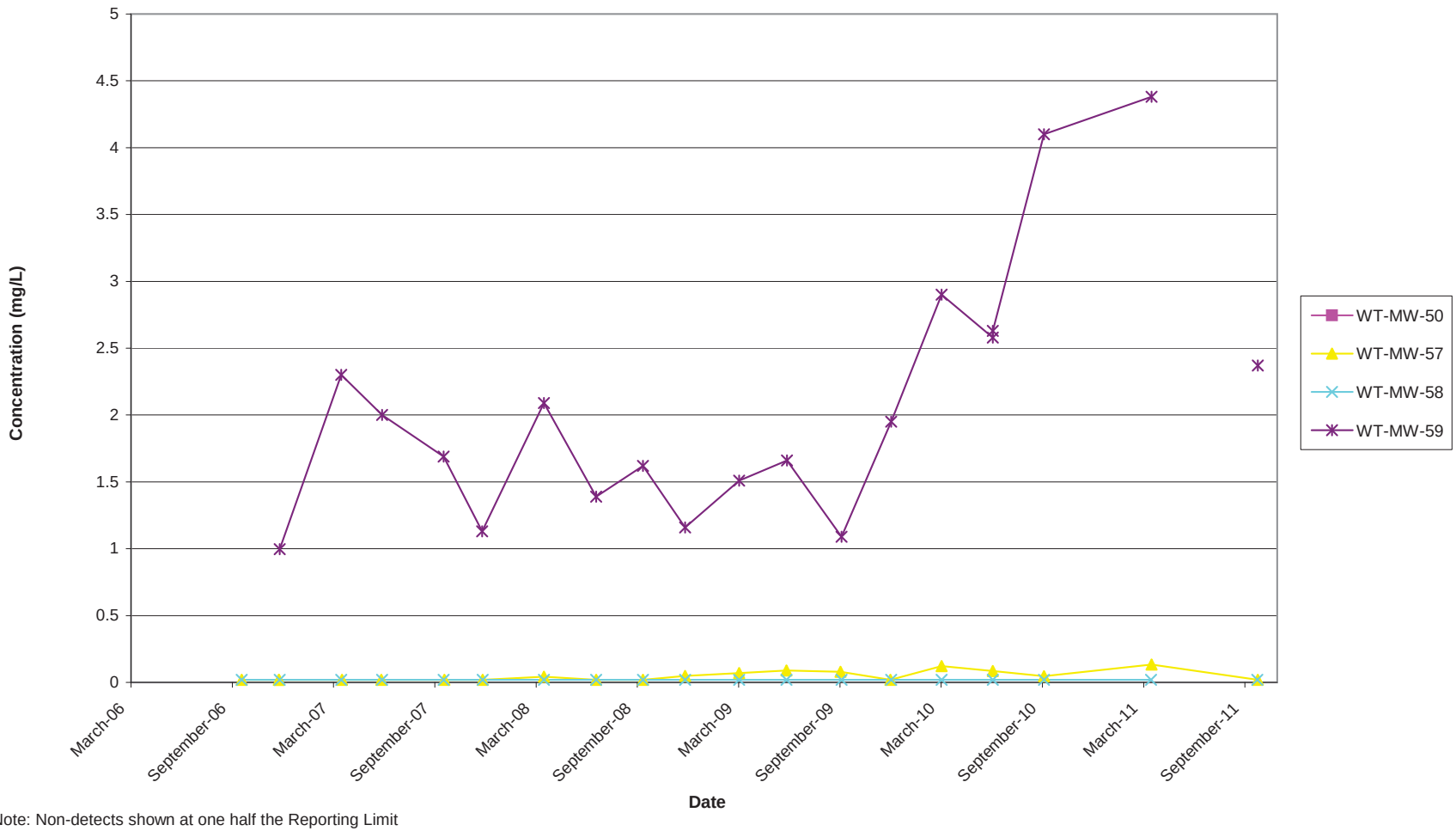


Note: Non-detects shown at one half the Reporting Limit



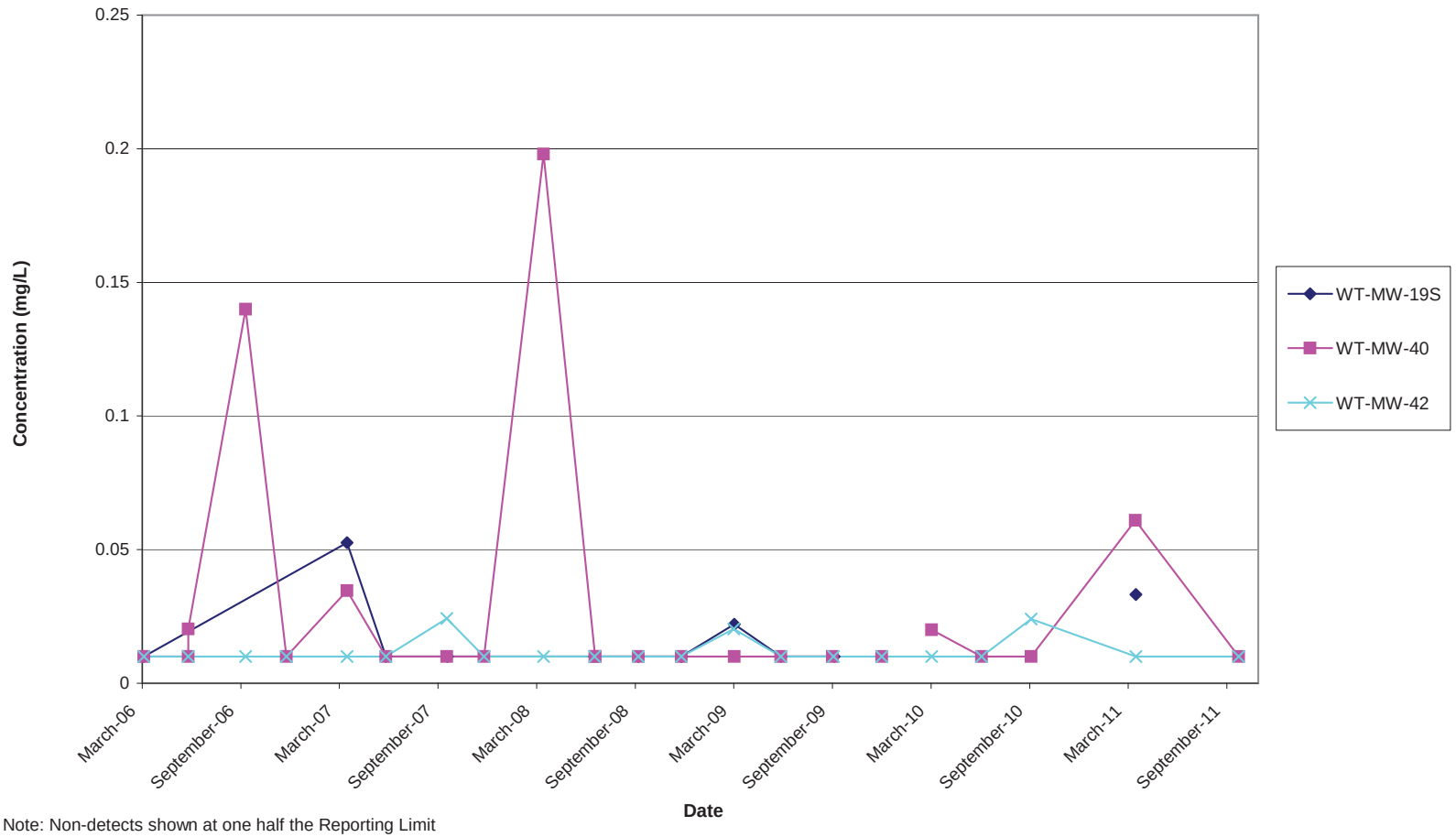
Note: Non-detects shown at one half the Reporting Limit

Nickel (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

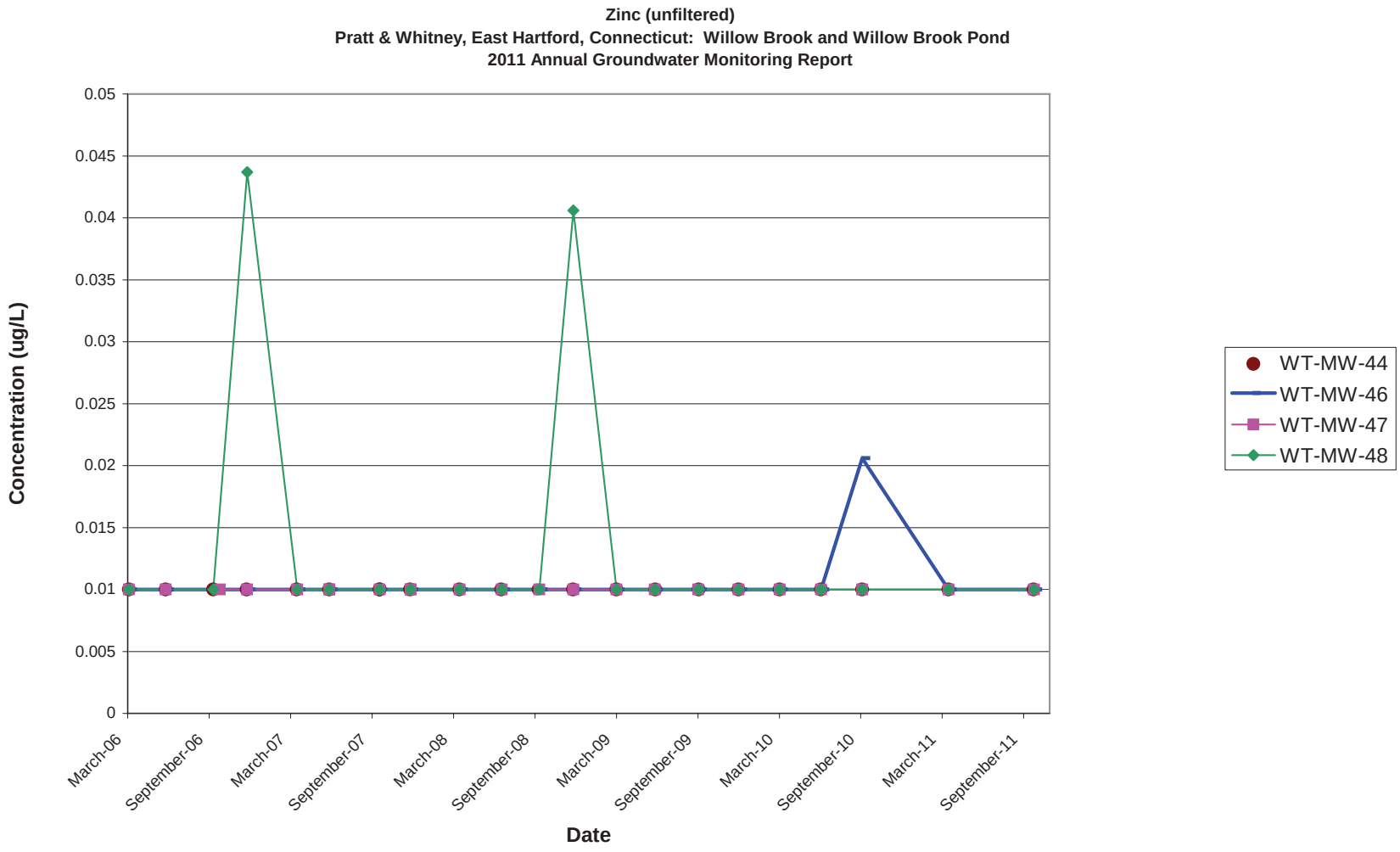


Note: Non-detects shown at one half the Reporting Limit

Zinc (unfiltered)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report

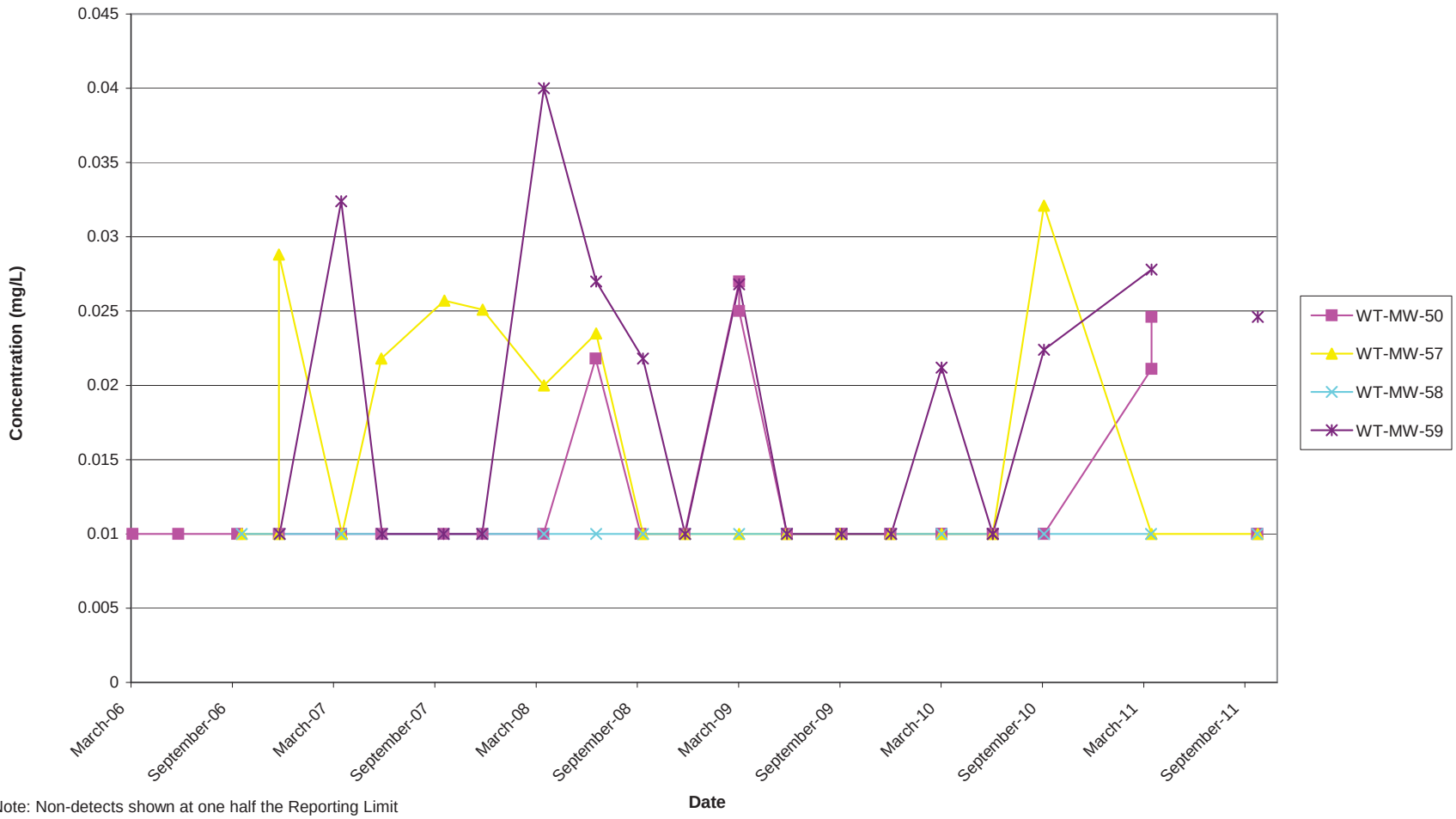


Note: Non-detects shown at one half the Reporting Limit



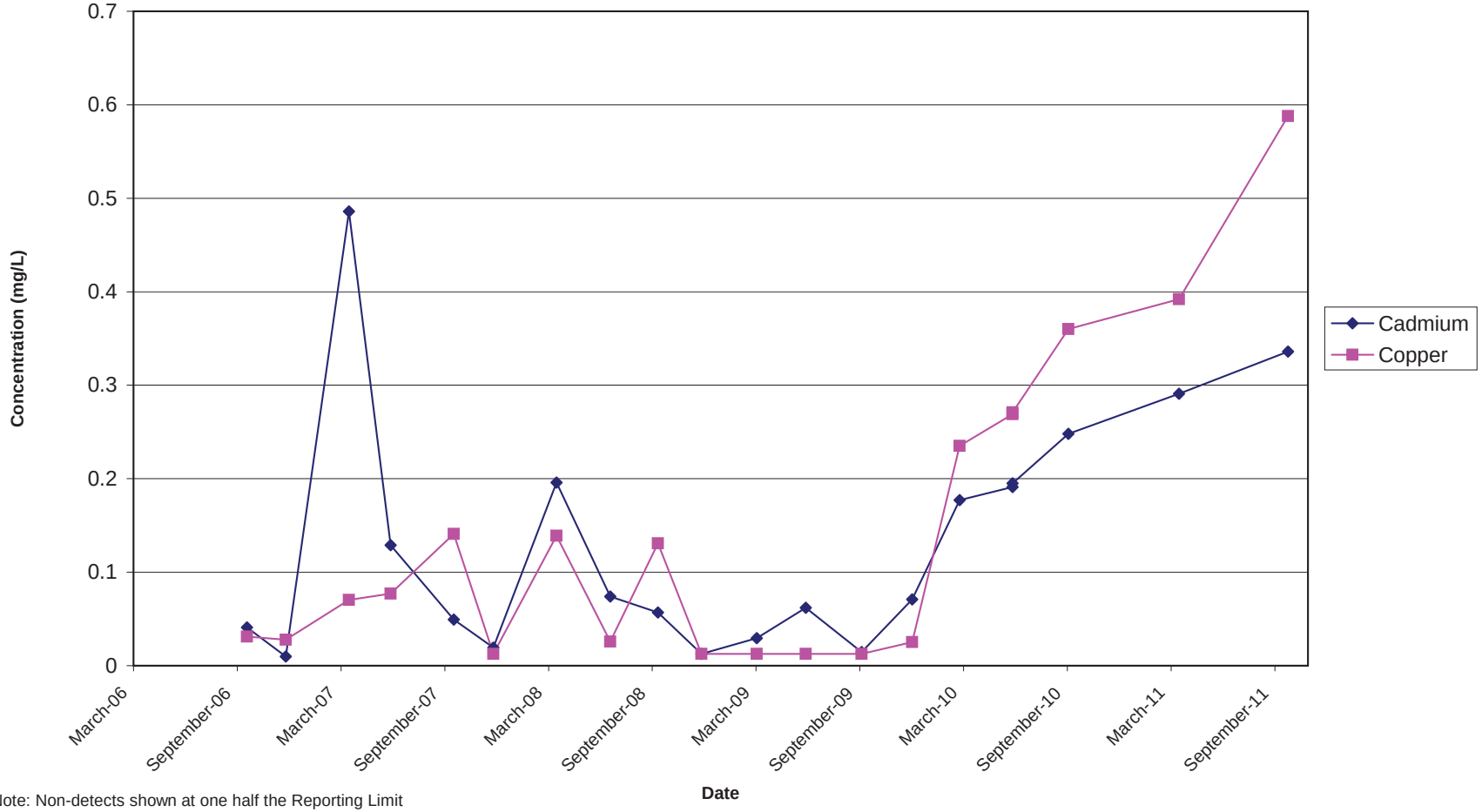
Note: Non-detects shown at one half the Reporting Limit

Zinc (unfiltered)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



Note: Non-detects shown at one half the Reporting Limit

Select Metals in Monitoring Well WT-MW-59
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2011 Annual Groundwater Monitoring Report



Note: Non-detects shown at one half the Reporting Limit

Appendix E

Post-Remediation Maintenance Monitoring Forms

United Technologies/Pratt & Whitney
Post Remediation Maintenance and Monitoring Program
Willow Brook and Willow Brook Pond

Weather Conditions: Overcast 45°
Inspection Date: 3/14/11
Inspection Time: 12:45
Inspector: Robin McKinney
Reviewed By: Dave Gereck

Inspection Conducted after significant rain event totalling > 2" in 24 hours. (2.73" of rain 3/6-3/7)

INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR	
1) Signs of erosion	Check for gullies of more than 2 inches in depth.		X		- see Note #1.
2) Signs of settling	Look for ponding and for settling of soil of more than 3 inches over a 5 sq. foot area.	X			
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	X			
4) Undesirable growth	Check for growth that is in excess of ½ inch in diameter (woody vegetation) and taller than 2 feet.			X	- woody veg. around eastern end of Lower Willow Pond + ~~South~~ western half of upper Willow Pond (see Note #2).
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing water or areas where surface water is running onto cap.	X			
6) Condition of fencing and gates	Check perimeter fence to make sure it is not damaged (no holes greater than 4-inches in diameter), gates are operable, and locks are in place.	X			
7) Condition of rip-rap in Willow Brook stream channel	Observe entire length of stream channel. Verify that rip-rap has not been displaced.	X			
8) Condition of stone layer in Willow Brook	Perform probing of bottom of Willow Brook Ponds at 5 locations in upper pond and 15 locations within lower pond. Verify refusal on stone layer at all locations.	X			- Not - water level too low for boat
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in cap.	X			
10) Monitoring well network	Check concrete collar protective casing, locks, legible well identification.		X		- Good map but not all labeled on wells
	1.Condition of lock	X			
	2.Visible ID of wells				
	3.Ponding or infiltration of surface water		X		- standing water in WT-EW-47 + WT-MW-57
	4.Condition of concrete collar	X			caps secure
	5.Condition of steel casing	X			

Report all deficiencies to the designated representative of Pratt & Whitney
List all deficiencies, the corrective measures taken, and the date corrective measures were completed:

1) Erosion channel observed just below manmade dam.

Corrective Action: P&W is aware of condition and has plans to repair it.

2) Woody growth measuring > 0.5 inch dia. and > 2' tall observed on eastern end of

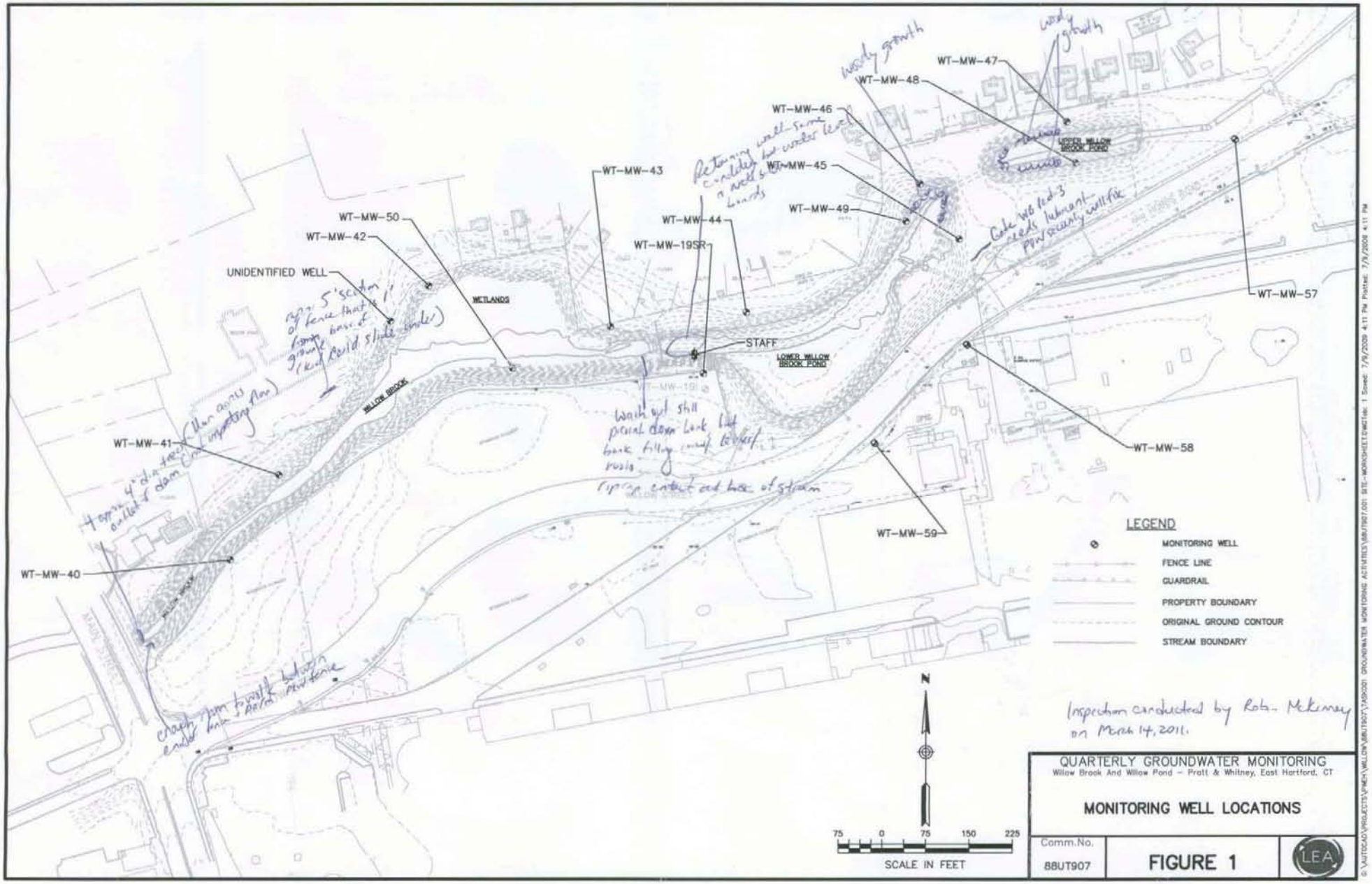
Corrective Action: lower Willow Pond and western half of upper Willow Pond in capped area.

3) 2- Corrective Action - P&W is aware of condition and has plans to remove woody growth.

Corrective Action:

4)

Corrective Action:


WT-MW-47
WT-MW-48
WT-MW-46
WT-MW-45
WT-MW-49
WT-MW-44
WT-MW-19SR
WT-MW-43
WT-MW-50
WT-MW-42
UNIDENTIFIED WELL
WETLANDS
STAFF
LOWER WILLOW BROOK POND
WILLOW BROOK
WT-MW-41
WT-MW-40
WT-MW-57
WT-MW-58
WT-MW-59
LEGEND
MONITORING WELL
FENCE LINE
GUARDRAIL
PROPERTY BOUNDARY
ORIGINAL GROUND CONTOUR
STREAM BOUNDARY
N
75 0 75 150 225
SCALE IN FEET
Inspection conducted by Rob. McKinney on March 14, 2011.
QUARTERLY GROUNDWATER MONITORING
Willow Brook And Willow Pond – Pratt & Whitney, East Hartford, CT
MONITORING WELL LOCATIONS
Comm.No.
88UT907
FIGURE 1
LEA

11 of 11

United Technologies/Pratt & Whitney
Post Remediation Maintenance and Monitoring Program
Willow Brook and Willow Brook Pond

Weather Conditions: 70°
Inspection Date: 9/28/11
Inspection Time: 8:00

Inspector: Nate Emmons
Reviewed By: Robin McKinney

INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR
1) Signs of erosion	Check for gullies of more than 2 inches in depth.	✓		
2) Signs of settling	Look for ponding and for settling of soil of more than 3 inches over a 5 sq. foot area.	✓		
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	✓		
4) Undesirable growth	Check for growth that is in excess of ½ inch in diameter (woody vegetation) and taller than 2 feet.	✓		
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing water or areas where surface water is running onto cap.	✓		
6) Condition of fencing and gates	Check perimeter fence to make sure it is not damaged (no holes greater than 4-inches in diameter), gates are operable, and locks are in place.	✓		
7) Condition of rip-rap in Willow Brook stream channel	Observe entire length of stream channel. Verify that rip-rap has not been displaced.	✓		
8) Condition of stone layer in Willow Brook	Perform probing of bottom of Willow Brook Ponds at 5 locations in upper pond and 15 locations within lower pond. Verify refusal on stone layer at all locations.	✓		
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in cap.	✓		
10) Monitoring well network	Check concrete collar protective casing, locks, legible well identification.	✓		
	1.Condition of lock	✓		
	2.Visible ID of wells			✓
	3.Ponding or infiltration of surface water		✓	
	4.Condition of concrete collar	✓		
	5.Condition of steel casing	✓		

Report all deficiencies to the designated representative of Pratt & Whitney
List all deficiencies, the corrective measures taken, and the date corrective measures were completed:

1) Wells Dont have visible ID, However they are easily Identified with map

Corrective Action:

2) few wells have standing water inside Road Box

Corrective Action:

3)

Corrective Action:

4)

Corrective Action:

Appendix F

LEA Proposed Modifications Groundwater Monitoring Programs and CT DEP Approval Letter

Loureiro Engineering Associates, Inc.

April 16, 2010

State of Connecticut
Department of Environmental Protection
Water Protection & Land Reuse
79 Elm Street
Hartford, CT 06016-5127

Attn: Maurice Hamel

RE: Proposed Modifications to the Willow Brook Pond and Willow Street North Groundwater Monitoring Programs, UTC/Pratt & Whitney, East Hartford, Connecticut Facility
LEA Comm. No. 88UT043

Dear Mr. Hamel:

As you are aware, United Technologies Corporation (UTC), Pratt & Whitney Division (P&W) has been conducting a program of quarterly groundwater monitoring and inspections to demonstrate the effectiveness polychlorinated biphenyl (PCB) remediation of contaminated soil and sediment within and immediately surrounding Willow Brook, Willow Brook Pond, and Willow Street North (herein after referred to as the "Project Areas") at the UTC/Pratt & Whitney manufacturing facility in East Hartford, Connecticut. As of the date of this letter, we can establish that the remediation has been effective and can demonstrate compliance with the Remediation Standard Regulations (RSRs) for PCBs. Other constituents present in groundwater from upgradient sources continue to be detected at concentrations historically observed for the Project Areas. Based on several years of data showing that conditions are at steady state, we are respectfully requesting, on behalf of UTC/P&W, approval for modifications to the groundwater monitoring program including decreases in both the sampling frequency and the number of locations sampled. Data supporting the proposed modifications is summarized herein.

Remediation Projects

The remediation of soil and sediment within and surrounding Willow Brook and Willow Brook Pond was undertaken to satisfy the requirements of Consent Order SRD-130 and was completed on August 31, 2002 (Willow Brook Pond Project). As you are aware, Consent Order SRD-130 remains in effect. Consistent with our meeting in April 2008 and our subsequent letter of May 1, 2008, it seems appropriate that the remediation activities be formally recognized by the DEP as being completed and the order be retired. The remediation of soil in areas between and below Willow Street and Willow Brook Pond (the Willow Street North Project) was undertaken by UTC/Pratt & Whitney on a voluntary basis in accordance with the document entitled *Remedial Action Work Plan and Request for Variance, Engineered Control of Polluted Soils, Willow Street*

and Willow Street North PCB Remediation Project (RAWP/RFV), approved by the Connecticut Department of Environmental Protection (DEP) on February 10, 2006. The Willow Street North Project was completed on August 11, 2006.

Groundwater Monitoring

Eleven groundwater monitoring wells (WT-MW-40 through WT-MW-50) were installed around the periphery of Willow Brook and Willow Brook Pond in June 2002. Three additional monitoring wells (WT-MW-57 through WT-MW-59) were installed in September 2006 following completion of the Willow Street North Project. One new monitoring well (WT-MW-19SR) was installed in April 2008 to replace monitoring well WT-MW-19S which had been installed prior to both remediation projects. The locations of these monitoring wells are depicted on the attached Site Plan.

Groundwater monitoring began after the completion of the Willow Brook Pond Project in 2002, was expanded following the Willow Street North Project in 2006, and continues to be conducted on a quarterly basis using a network of fifteen groundwater monitoring wells. The groundwater monitoring plans are detailed in Appendix D of the RAWP/RFV for the Willow Brook Pond Project and Appendix C of the RAWP/RFV for Willow Street North Project.

Groundwater samples from all fifteen monitoring wells are analyzed on a quarterly basis for PCBs by EPA Method 8082; volatile organic compounds (VOCs) by EPA Method 8260B; Connecticut Extractable Total Petroleum Hydrocarbons (ETPH) by the DEP approved method; and total metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc). Reports documenting the groundwater monitoring are submitted to DEP on an annual basis.

PCBs have only been detected on a few occasions over the seven years of post remediation monitoring and have not been detected in any of the groundwater samples analyzed over the past three years of quarterly post-remediation monitoring. Chlorinated VOCs, ETPH and total metals from sources located upgradient of the Project Areas continue to be detected in groundwater samples on a regular basis. A groundwater analytical data summary table listing each constituent detected, the maximum concentration detected, and date of the most recent detection is attached.

Groundwater Monitoring Program Reduction

Modifications to the groundwater monitoring program are being proposed as groundwater analytical results support the conclusion that remediation activities performed to date have been effective in eliminating PCBs as a potential groundwater contaminant source and that the concentrations of VOCs, ETPH and total metals at locations upgradient of the Project Areas have remained stable over time with no increasing trends. Based on these findings, we request authorization to reduce the monitoring frequency from quarterly to semi-annually. We also request that sampling of monitoring wells WT-MW41, WT-MW43, WT-MW45 and WT-MW49 be discontinued. The remaining eleven monitoring wells that will continue to be sampled under the revised groundwater monitoring plan are considered adequate to confirm that the engineered controls continue to function as intended.

The first groundwater monitoring event for 2010 was completed on March 3, 2010. As such, we are proposing to conduct the next monitoring event in September 2010 in accordance with the revised groundwater monitoring frequency. Further modifications to the groundwater monitoring program will be evaluated after two semi-annual events have been completed and at appropriate times in the future.

We respectfully request a response to our request for modifications to the groundwater monitoring program before May 31, 2010. We would also appreciate an update regarding the status of actions being taken to retire SRD-130. Should have any questions or comments regarding this submission or any other aspect of the project, please contact me at 860-410-2968 or Lauren Levine at 860-728-6520.

Sincerely,

LOUREIRO ENGINEERING ASSOCIATES, INC.

Brian A. Cutler, P.E., L.E.P.
Senior Vice President

Attachments

cc: Lauren Levine, UTC

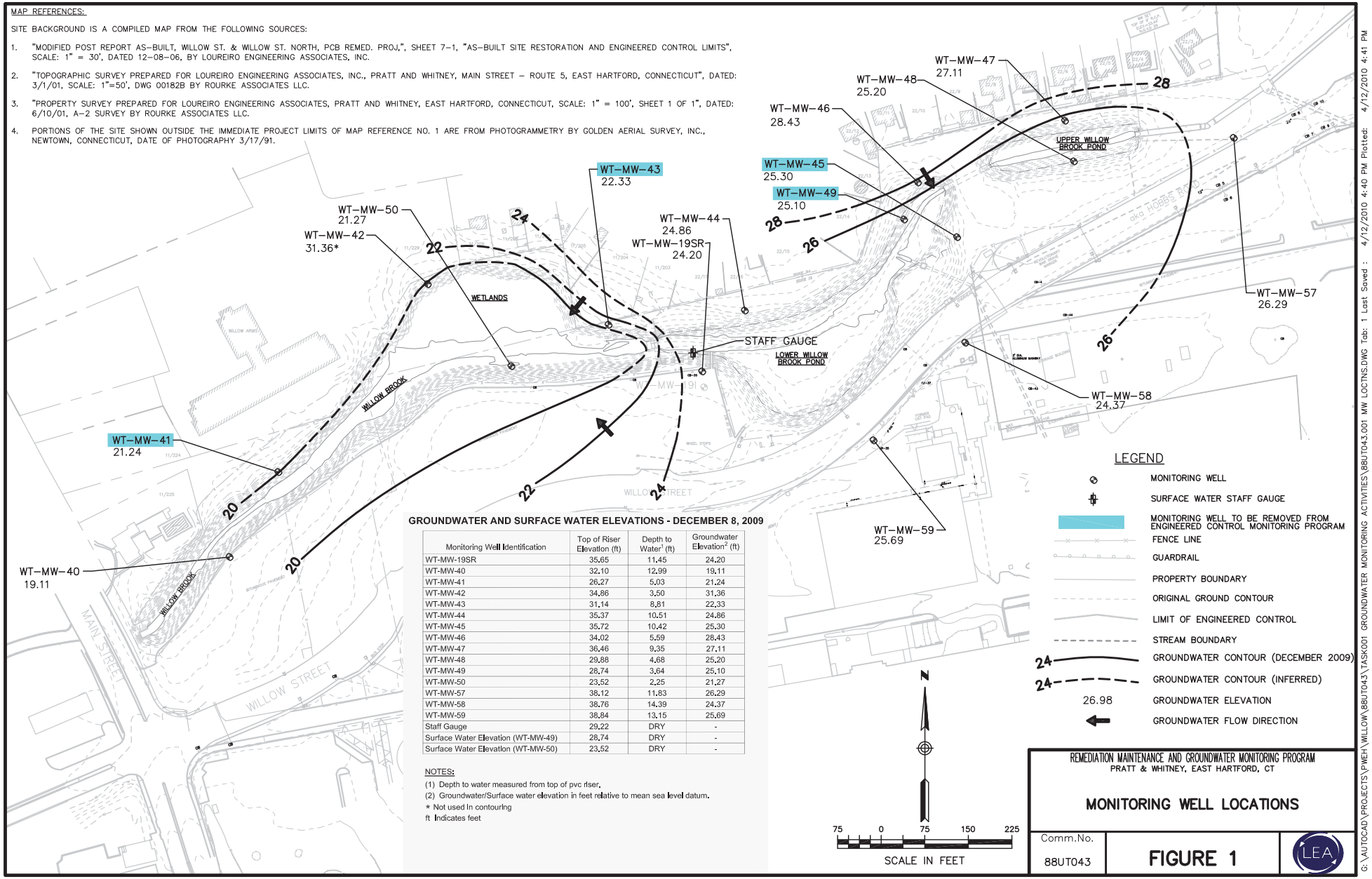
FIGURES

EXISTING AND PROPOSED MONITORING WELL NETWORK

MAP REFERENCES:

SITE BACKGROUND IS A COMPILED MAP FROM THE FOLLOWING SOURCES:

1. "MODIFIED POST REPORT AS-BUILT, WILLOW ST. & WILLOW ST. NORTH, PCB REMED. PROJ,", SHEET 7-1, "AS-BUILT SITE RESTORATION AND ENGINEERED CONTROL LIMITS", SCALE: 1" = 30', DATED 12-08-06, BY LOUREIRO ENGINEERING ASSOCIATES, INC.
2. "TOPOGRAPHIC SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, INC., PRATT AND WHITNEY, MAIN STREET – ROUTE 5, EAST HARTFORD, CONNECTICUT", DATED: 3/1/01, SCALE: 1"=50', DWG 00182B BY ROURKE ASSOCIATES LLC.
3. "PROPERTY SURVEY PREPARED FOR LOUREIRO ENGINEERING ASSOCIATES, PRATT AND WHITNEY, EAST HARTFORD, CONNECTICUT, SCALE: 1" = 100', SHEET 1 OF 1", DATED: 6/10/01, A-2 SURVEY BY ROURKE ASSOCIATES LLC.
4. PORTIONS OF THE SITE SHOWN OUTSIDE THE IMMEDIATE PROJECT LIMITS OF MAP REFERENCE NO. 1 ARE FROM PHOTOGRAMMETRY BY GOLDEN AERIAL SURVEY, INC., NEWTOWN, CONNECTICUT, DATE OF PHOTOGRAPHY 3/17/91.



GROUNDWATER AND SURFACE WATER ELEVATIONS - DECEMBER 8, 2009

Monitoring Well Identification	Top of Riser Elevation (ft)	Depth to Water[1] (ft)	Groundwater Elevation[2] (ft)
WT-MW-19SR	35.65	11.45	24.20
WT-MW-40	32.10	12.99	19.11
WT-MW-41	26.27	5.03	21.24
WT-MW-42	34.86	3.50	31.36
WT-MW-43	31.14	8.81	22.33
WT-MW-44	35.37	10.51	24.86
WT-MW-45	35.72	10.42	25.30
WT-MW-46	34.02	5.59	28.43
WT-MW-47	36.46	9.35	27.11
WT-MW-48	29.88	4.68	25.20
WT-MW-49	28.74	3.64	25.10
WT-MW-50	23.52	2.25	21.27
WT-MW-57	38.12	11.83	26.29
WT-MW-58	38.76	14.39	24.37
WT-MW-59	38.84	13.15	25.69
Staff Gauge	29.22	DRY	-
Surface Water Elevation (WT-MW-49)	28.74	DRY	-
Surface Water Elevation (WT-MW-50)	23.52	DRY	-

NOTES:

(1) Depth to water measured from top of pvc riser.
(2) Groundwater/Surface water elevation in feet relative to mean sea level datum.
* Not used in contouring
ft Indicates feet

REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING PROGRAM
PRATT & WHITNEY, EAST HARTFORD, CT

MONITORING WELL LOCATIONS

Comm.No. 88UT043

FIGURE 1

LEA

G:\AUTOCAD\PROJECTS\PWEH\WILLOW\88UT043\TASK001 GROUNDWATER MONITORING ACTIVITIES\88UT043.001 MW LOCTNS.DWG Tab: 1 Last Saved : 4/12/2010 4:40 PM Plotted: 4/12/2010 4:41 PM

TABLE

SUMMARY OF CONSTITUENTS DETECTED
(DECEMBER 2002 THROUGH DECEMBER 2009)

Constituents Detected in Groundwater
Willow Brook Pond and Willow Street North Project Areas
UTC/Pratt and Whitney, East Hartford, Connecticut

Constituent	No. of Samples Analyzed[1]	No. of Detects	Maximum Concentration Detected				Date of Most Recent Detection
			Conc.	Units	Well I.D.	Date	
CT ETPH	403	172	1.66	ug/l	WT-MW-59	12/5/2007	12/9/2009
VOCs							
Acetone	411	18	32.1	ug/l	WT-MW-50	6/4/2005	6/7/2007
Methyl tert-Butyl ether	411	9	4.5	ug/l	WT-MW-48	9/28/2007	12/5/2007
Xylenes,m- & p-	411	2	2	ug/l	WT-MW-50	6/7/2007	6/7/2007
Toluene	411	8	13.5	ug/l	WT-MW-50	9/15/2008	1/20/2010
Methylene Chloride	411	9	23.5	ug/l	WT-MW-59	12/6/2006	9/11/2009
1,1,2-Trichlorotrifluoroethane	411	1	5.8	ug/l	WT-MW-59	9/11/2009	9/11/2009
1,1,1-Trichloroethane	411	36	477	ug/l	WT-MW-40	9/21/2006	12/8/2009
1,1-Dichloroethane	411	82	126	ug/l	WT-MW-40	9/21/2006	2/18/2010
1,1-Dichloroethylene	411	70	1100	ug/l	WT-MW-40	9/21/2006	2/18/2010
Benzene	411	21	6.2	ug/l	WT-MW-19SR	6/5/2009	12/8/2009
Chloroform	411	39	42.7	ug/l	WT-MW-19SR	6/5/2009	12/8/2009
Tetrachloroethylene	411	79	384	ug/l	WT-MW-40	3/24/2008	12/9/2009
Trichloroethylene	411	92	2730	ug/l	WT-MW-40	9/21/2006	11/23/2009
Vinyl Chloride	411	94	162	ug/l	WT-MW-40	9/27/2007	2/18/2010
cis-1,2-Dichloroethylene	411	143	804	ug/l	WT-MW-40	9/21/2006	2/18/2010
Methyl Ethyl ketone	411	1	15.2	ug/l	WT-MW-45	6/8/2004	6/8/2004
1,2-Dichloroethane	411	32	17.3	ug/l	WT-MW-40	9/21/2006	12/22/2009
Chloroethane	411	5	15.1	ug/l	WT-MW-40	9/21/2006	12/8/2009
Chloromethane	411	2	6.5	ug/l	WT-MW-42	6/5/2009	6/5/2009
trans-1,2-Dichloroethylene	411	44	14.6	ug/l	WT-MW-40	9/21/2006	2/18/2010
1,1,2-Trichloroethane	411	3	11.3	ug/l	WT-MW-40	9/21/2006	3/24/2008
Tetrahydrofuran	411	10	72.1	ug/l	WT-MW-50	12/6/2007	12/8/2009
Metals							
Arsenic (unfiltered)	396	125	0.0246	mg/l	WT-MW-50	6/30/2003	12/8/2009
Arsenic	6	6	0.0112	mg/l	WT-MW-48	9/19/2005	6/4/2009
Barium (unfiltered)	396	99	0.604	mg/l	WT-MW-50	12/23/2002	12/8/2009
Chromium, Total (unfiltered)	397	34	0.203	mg/l	WT-MW-59	9/27/2007	3/10/2009
Chromium, Total	6	3	0.0212	mg/l	WT-MW-59	9/27/2007	3/10/2009
Nickel (unfiltered)	396	82	2.3	mg/l	WT-MW-59	3/27/2007	12/9/2009
Nickel	6	3	1.46	mg/l	WT-MW-59	9/29/2006	9/29/2006
Selenium (unfiltered)	396	7	0.0145	mg/l	WT-MW-48	12/3/2003	12/17/2004
Selenium	6	1	0.0111	mg/l	WT-MW-48	3/22/2005	3/22/2005
Cadmium (unfiltered)	396	13	0.486	mg/l	WT-MW-59	3/27/2007	12/9/2009
Cadmium	6	1	0.0408	mg/l	WT-MW-59	9/29/2006	9/29/2006
Silver (unfiltered)	396	1	0.009	mg/l	WT-MW-59	3/27/2007	3/27/2007
Zinc (unfiltered)	396	44	0.198	mg/l	WT-MW-40	3/24/2008	3/11/2009
Zinc	6	2	0.021	mg/l	WT-MW-59	9/29/2006	9/29/2006
Lead (unfiltered)	396	8	0.0188	mg/l	WT-MW-48	9/28/2007	9/28/2007
Copper (unfiltered)	396	12	0.141	mg/l	WT-MW-59	9/27/2007	12/9/2009
Copper	6	1	0.0311	mg/l	WT-MW-59	9/29/2006	9/29/2006
Iron (unfiltered)	1	1	10.1	mg/l	WT-MW-50	2/26/2008	2/26/2008
Iron, Ferrous (unfiltered)	1	1	3.3	mg/l	WT-MW-50	2/26/2008	2/26/2008
Manganese (unfiltered)	1	1	6.84	mg/l	WT-MW-50	2/26/2008	2/26/2008
Manganese	1	1	6.54	mg/l	WT-MW-50	2/26/2008	2/26/2008
Nitrate Plus Nitrite (As N) (unfiltered)	1	1	7.8	mg/l	WT-MW-50	2/26/2008	2/26/2008
Nitrite Nitrogen (unfiltered)	1	1	0.052	mg/l	WT-MW-50	2/26/2008	2/26/2008
Nitrogen, Nitrate (unfiltered)	1	1	7.7	mg/l	WT-MW-50	2/26/2008	2/26/2008
Sulfate (unfiltered)	1	1	82.8	mg/l	WT-MW-50	2/26/2008	2/26/2008
Total Organic Carbon	1	1	23.3	mg/l	WT-MW-50	2/26/2008	2/26/2008
Dissolved Organic Carbon (dissolved)	1	1	21.6	mg/l	WT-MW-50	2/26/2008	2/26/2008
PCBS							
Arochlor 1248	404	3	1.2	ug/l	WT-MW-44	3/27/2007	3/27/2007
Arochlor 1254	404	2	0.29	ug/l	WT-MW-45	7/22/2003	7/22/2003

Notes:
[1] Includes samples collected and analyzed from Project Area wells as part of other groundwater monitoring programs
PCBs - Polychlorinated biphenyls
VOCs - Volatile organic compounds
ETPH - Connecticut Extractable Total Petroleum Hydrocarbons
mg/L - Milligrams per liter
ug/L - Micrograms per liter

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPROVAL

AUGUST 12, 2010

Lauren Levine
EH&S Department
United Technologies
One Financial Plaza
Hartford, CT 06101

RE: Willow Brook
PWA, 400 Main Street, East Hartford

Dear Ms. Levine:

The Remediation Division of the Bureau of Water Protection and Land Reuse has reviewed the letter titled, "Proposed Modification to the Willow Brook Pond and Willow Street North Groundwater Monitoring Programs, UTC/Pratt & Whitney, East Hartford, Connecticut Facility", dated April 16, 2010. The letter was prepared on your behalf by Loureiro Engineering Associates, Inc. and submitted in conjunction with Order #130.

The letter requests approval of modifications to the groundwater monitoring program approved on February 10, 2006, as part of the "Remedial Action Work Plan and Request for Variance, Engineered Control of Polluted Soils." It proposes the elimination of four of the fifteen monitoring wells from the program and reduction of the sampling frequency from quarterly to semi-annually.

The above referenced report is hereby approved.

The next deliverable due from you is the September 2010 monitoring results which are due on or before the end of the year.

Nothing in this approval shall affect the Commissioner's authority to institute any proceeding, or take any action to prevent or abate pollution, to recover costs and natural resource damages, and to impose penalties for violations of law. If at any time the Commissioner determines that the approved actions have not fully characterized the extent and degree of pollution or have not successfully abated or prevented pollution, the Commissioner may institute any proceeding, or take any action to require further investigation or further action to prevent or abate pollution. This approval relates only to pollution or contamination identified in the above referenced report.

In addition, nothing in this approval shall relieve any person of his or her obligations under applicable federal, state and local law.

If you have any questions pertaining to this matter, please contact Maurice Hamel of my staff at (860) 424-3787.

Sincerely,

Patrick F. Bowe, Director
Remediation Division
Bureau of Water Protection and Land Reuse

PFB:MRH
c: Brian Cutler, LEA