Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

Facility Address: 900 S. Central Ave; Roxana, IL 62048

Site ID #: 1191150002 Fed ID #: ILD 080 012 305

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

☐ LPC-160 Forms

Groundwater	Leachate
___ Quarterly - Enter: 1, 2, 3, or 4	___ Quarterly - Enter: 1, 2, 3, or 4
☐ Semi-Annual	☐ Semi-Annual
☐ Annual	☐ Annual
☐ Biennial	☐ Biennial

☑ Groundwater Data (without LPC-160 Forms)

4 Quarterly - Enter: 1, 2, 3, or 4 ☐ Annual ☐ Semi-Annual ☐ Biennial

☐ Well Construction Information

- ☐ Well Construction Forms, Boring Logs and/or Abandonment Forms
- ☐ Well Survey Data (e.g., Stick-up Elevation Data)

☐ Notice of Statistically Significant Evidence of Groundwater Contamination (35 Ill. Adm. Code 724.198)

☐ Notice of Exceedence of Groundwater Concentration Limit (35 Ill. Adm. Code 724.199(h))

☐ Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater (35 Ill. Adm. Code 724.199(i))

☐ Gas Monitoring Reports

☐ Other (identify)

_____

_____

AECOM
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110-1337
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314 429 0100 tel
314 429 0462 fax

January 14, 2015

Mr. Steven F. Nightingale, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794

Groundwater Monitoring Report – 4th Quarter 2014
Roxana, Illinois
119115002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43-CA-21

Dear Mr. Nightingale:

On behalf of Shell Oil Products US, AECOM (formerly URS Corporation) is submitting the enclosed report for your review. This sampling was required by Condition 7 of the Agency's letter dated August 5, 2010.

On October 23, 2014, the Agency was notified that the acquisition of URS Corporation by AECOM had occurred. Effective January 5, 2015, all work for SOPUS will be performed under the AECOM name. The attached report is the final deliverable for 2014 and as such is being submitted as a URS Corporation document.

If you have any questions during your review, please contact Kevin Dyer, SOPUS Senior Principal Program Manager, at kevin.dyer@shell.com (618/288-7237), or Bob Billman at bob.billman@aecom.com (314/743-4108).

Sincerely,

AECOM, on behalf of Shell Oil Products US

Lindsay Rathnow
Geologist

Robert B. Billman
Senior Project Manager

Enclosures: RCRA Facility Groundwater, Leachate and Gas Reporting Form, Report (original plus 1 copy)

cc: Kevin Dyer, SOPUS
Eric Petersen, Phillips 66
Amy Boley, IEPA, Springfield
Gina Search, IEPA, Collinsville
Shannon Haney, Greensfelder, Hemker & Gale P.C.
Repositories – Village Hall, Roxana Public Library, website

REPORT

INTERIM GROUNDWATER MONITORING PROGRAM – 4TH QUARTER 2014

Roxana, Illinois

Prepared for:

Shell Oil Products US
17 Junction Drive
PMB#399
Glen Carbon, Illinois 62034

January 2015

URS Corporation
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project 21562973.03004

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URS Corporation (URS) is submitting this report on behalf of Shell Oil Products US (SOPUS) for the 4th Quarter 2014 (4Q14) groundwater monitoring well gauging and sampling conducted in the Village of Roxana, Illinois (**Figure 1**). The study area within the Village of Roxana (Village) is generally bounded by the alley north of First Street, Illinois Route 111, the West Fenceline of the WRB Refining, LP (WRB)[1] Wood River Refinery (WRR), and the Roxana Public Works Yard. Some groundwater monitoring wells within the WRR were also sampled as part of this event; this was conducted in cooperation with WRB/Phillips 66 (P66)[2]. For purposes of presentation in this report only, the combined area is collectively referred to as the "Investigation Area."

In an August 5, 2010, letter from the Illinois Environmental Protection Agency (IEPA) to SOPUS (IEPA, 2010), IEPA requested various site characterization and monitoring activities, along with initiation of an interim groundwater monitoring program. This program began in the 4th Quarter 2010 (4Q10), and the first report was submitted on January 14, 2011. On March 3, 2011, a conference call was held among representatives of SOPUS, IEPA, and URS to discuss the groundwater monitoring program and IEPA's general comments on the 4Q10 report. Subsequent modifications were incorporated during the 1st Quarter 2011 (1Q11) and 2nd Quarter 2011 (2Q11) Roxana Interim Groundwater Monitoring Program. Additional items/comments regarding the Roxana Interim Groundwater Monitoring Program were presented by IEPA in June 16, 2011 (IEPA, 2011a) and August 31, 2011 (IEPA, 2011b) letters. These items/comments were addressed in the 3rd Quarter 2011 (3Q11) and 4th Quarter 2011 (4Q11) reports.

In a March 14, 2012, letter (CA-24) from IEPA to SOPUS (IEPA, 2012a), IEPA requested groundwater piezometer ROST-3-PZ and groundwater monitoring well ROST-4-PZ(C) be added to the program. These monitoring locations have been added to the program and the results incorporated into this report.

In a second letter (CA-25), dated March 14, 2012, from IEPA to SOPUS (IEPA, 2012b), IEPA requested that perched groundwater be evaluated at the following existing groundwater monitoring piezometers: P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ. These perched groundwater monitoring piezometers were incorporated into the program beginning in the 2nd Quarter 2012 (2Q12) and continue to be evaluated. In a letter dated August 16, 2013, URS, on behalf of SOPUS, informed the IEPA of the determination that the

[1] WRB, formed January 1, 2007, is a 50/50 joint venture between ConocoPhillips (COP) and EnCana US Refineries, LLC (now known as Cenovus Energy, Inc.).

[2] ConocoPhillips Company announced the separation of the Refining and Marketing business from the Exploration & Production business on July 14, 2011. The separation included an ownership change as well as a name change that became effective May 1, 2012. Phillips 66 is now the operator of the WRB WRR.

perched groundwater monitoring piezometers are dry based on the criteria given in their March 14, 2012, letter or not able to be sampled per the groundwater sampling standard operating procedure (SOP). The IEPA, during phone conversations, requested that certain piezometers remain in the program. In response to this request, a letter dated January 14, 2014, was submitted to IEPA, stating that these piezometers will remain in the program. A separate letter dated January 14, 2014, was submitted to the IEPA requesting removal of ROST-5-PZ and ROST-10-PZ based on Condition 8(a) of the March 14, 2012, IEPA letter (CA-25), which states that ROST-5-PZ and ROST-10-PZ must remain within the program for one year before the determination is made that these wells are dry.

In the same March 14th letter (CA-25), IEPA also requested the installation of groundwater monitoring wells in the Village to evaluate potential light non-aqueous phase liquid (LNAPL). These groundwater monitoring wells were installed during the 4th Quarter 2012 (4Q12), with the last well being completed on December 8, 2012. These groundwater monitoring wells were incorporated into the program beginning in 1st Quarter 2013 (1Q13).

On May 31, 2012, IEPA verbally requested the following be incorporated into the 2Q12 report:

- The ROST-4 series of groundwater monitoring wells and piezometers in the groundwater elevation contour maps;
- A groundwater contour map focusing on the West Fenceline area in the Village; and
- A Roxana site and WRR LNAPL map.

In an April 8, 2013, letter from IEPA to SOPUS (IEPA, 2013b), IEPA requested a discussion of irregular potentiometric contours in the ROST-4-PZ area and P-60 area wells. This response was submitted to the IEPA in a letter dated July 29, 2013.

In a July 18, 2013, letter from IEPA to SOPUS (IEPA, 2013c), IEPA approved a change in gauging frequencies for wells in the Interim Groundwater Monitoring Program. The list of wells to be gauged on a weekly basis was reduced and a new list of wells to be gauged on a monthly basis was initiated. This letter also requested that any free phase hydrocarbon (FPH) and photoionization detector (PID) data collected at the well heads be included in the quarterly groundwater monitoring reports. The modified gauging frequencies for wells began the week of July 22, 2013. The list of wells gauged during each routine event is reviewed on a regular basis and modified to meet the conditions requested by the IEPA. The additional reporting requirements were first incorporated in the 3rd Quarter 2013 (3Q13) report.

In a June 13, 2014, letter from IEPA to SOPUS (IEPA, 2014), IEPA requested the installation of four groundwater monitoring wells in the Village to monitor the extent and effectiveness of

corrective action efforts within the residential area. The access agreement with the Village was signed on August 12, 2014, and well installation began in September 2014 and was completed in October 2014. Documentation of this work is provided in **Appendix A** of this report.

On December 5, 2014, a letter was submitted to IEPA by URS, on behalf of SOPUS, requesting a reduction in the routine gauging performed as part of the Interim Groundwater Monitoring Program. A response to this request is pending as of the date of this report.

Groundwater samples were collected and analyzed during 4Q14 to meet the requirements of the Interim Groundwater Monitoring Program, as specified in the above guidance. **Figure 2** shows the groundwater monitoring wells that were sampled during 4Q14 as part of the interim monitoring well network.

The groundwater monitoring well gauging and sampling procedures are discussed in this section. Gauging and sampling procedures are based on the Interim Groundwater Monitoring Program, as outlined in the IEPA's letter dated August 5, 2010 (IEPA, 2010), and as modified based on other correspondence, outlined in **Section 1** above.

2.1 ADDITIONAL ACTIVITIES OR MODIFICATIONS

The following additional work activities or modifications were conducted during the 4Q14 sampling event:

- Installation of four new groundwater monitoring wells (MW-25 through MW-28) began in 3rd Quarter 2014 (3Q14) and was completed in 4Q14. New well locations are shown on **Figure** 2. Wells were sampled as a part of the Interim Groundwater Monitoring Program beginning in 4Q14. Soil analytical data, boring logs, and well construction diagrams can be found in **Appendix A**.
- Groundwater monitoring well MW-28 was split sampled with the Village of Roxana on October 21, 2014.
- Monitoring wells P-57, P-92C, P-93A, and P-93C were replaced by Cascade Drilling LP during the first week of December 2014. These wells required replacement because the integrity of the well was potentially compromised (P-57), the dedicated pumps were stuck within the wells and unserviceable (P-93A and P-93C), or the well was found to be damaged (P-92C, which is gauged but not sampled as a part of the Interim Groundwater Monitoring Program). Documentation of this work will be provided in the 1st Quarter 2015 (1Q15) report.

2.2 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING

Groundwater Monitoring Well Gauging

The comprehensive quarterly groundwater monitoring well gauging event was conducted between October 1 and 3, 2014. The 4Q14 gauging activities were conducted in conjunction with the 4Q14 gauging event for the WRR to evaluate groundwater flow direction and identify possible separate phase LNAPL in the Investigation Area. Depth to LNAPL (if present) and depth to water were noted in electronic format using Panasonic Toughbook® technology (Toughbook®) and on groundwater field gauging sheets. The cumulative quarterly groundwater monitoring well gauging data can be found in **Table 1a**. Weekly and monthly gauging data is collected to assess the absence or presence of LNAPL. This gauging data for 4Q14 can be found in **Table 1b**. The groundwater gauging data tables also include well-head PID results.

Low Flow Groundwater Purging and Sampling

Groundwater samples were collected from groundwater monitoring wells from October 6 through October 21, 2014. Due to an anomalous benzene detection, a groundwater monitoring well confirmation sample was collected for VOCs from P-93D on November 4, 2014. Both sets of data are included in this report and are discussed in **Section 3.2**.

Groundwater samples were collected via low-flow groundwater purging and sampling procedures. Prior to groundwater monitoring well sampling, the initial water level was measured and recorded in the Toughbook® and on groundwater field data sheets.

Groundwater monitoring wells MW-1 through MW-14, MW-16, MW-22, MW-24 through MW-28, P-54, P-56 through P-59, P-66, P-74, P-93D, ROST-3-MW, ROST-4-PZ(C), and T-12 were purged and sampled using a stainless steel submersible pump, low flow controller, and designated polyethylene tubing[3]. The submersible pump, with the proper length of designated polyethylene tubing, was slowly lowered into the groundwater monitoring well to be sampled and the pump intake was set near the midpoint of the groundwater monitoring well screen.

Groundwater monitoring wells P-93A, P-93B, and P-93C, located on the WRR North Property, and P-114, located on the WRR West Property, were purged and sampled using a dedicated submersible stainless steel QED Environmental Systems, Inc. (QED) Well Wizard® groundwater monitoring well sampling pump and bonded dedicated polyethylene tubing. The dedicated pump intake is positioned near the midpoint of the well screen and the pump is operated using a QED MicroPurge Engine/Compressor with a QED Control Box.

For both sampling methods, the tubing from the sampling pump was connected to a flow-through cell, which discharged into a 5-gallon plastic container. Pumping was performed at a low flow rate (≤400 mL/minute) to minimize drawdown of the water level within the groundwater monitoring well. During groundwater purging, water quality parameters (pH, temperature, specific conductivity, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP)) were measured and recorded on the groundwater field data sheets after every flow-through cell volume. Purging continued until a minimum of three flow-through cell volumes of water were removed and the groundwater quality parameters stabilized. The final water quality parameters were recorded in the Toughbook® and on groundwater field data sheets. Once stabilization was achieved, the groundwater flow was diverted from the flow-through cell and

[3] All designated tubing is stored in a sealed bag designated for the particular groundwater monitoring well between sampling events.

groundwater samples were collected for volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis.

Perched groundwater monitoring piezometers ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ in the Village, and P-60-12S and P-60-13S in the WRR, could not be sampled according to the Standard Operating Procedure (SOP), due to slow recharge rates or lack of water. Groundwater monitoring wells P-55 and P-68, located inside the WRR, contained LNAPL and were not sampled. Groundwater sampling field parameters can be found in **Tables 2a and 2b,** and groundwater sampling data sheets are included in **Appendix B**.

2.3 HEALTH & SAFETY, DECONTAMINATION, AND INVESTIGATIVE DERIVED WASTE

Health & Safety

The quarterly sampling activities were performed and governed by the *Roxana / Route 111, WRR, and Rand Avenue Investigation Health and Safety Plan (HASP),* dated July 1, 2014 – December 31, 2014 (URS, 2014), as prepared by URS.

Prior to beginning site work and at the start of work each day, a daily safety meeting was held. The purpose of this meeting was to discuss the day's planned activities and to address any potential health and safety concerns. As a part of the daily safety meeting, job safety analyses (JSAs) were reviewed to address task specific safety concerns.

URS field personnel wore U.S. Environmental Protection Agency (USEPA) modified Level D personal protective equipment (PPE), which included hard hat, steel-toed boots, safety glasses, etc. In addition, work within the WRR was performed wearing flame retardant clothing (FRCs) per WRR requirements (in areas where required).

A PID with a 10.6 electron volt (eV) lamp, combustible gas indicator (CGI), and individual hydrogen sulfide gas detectors (for locations inside WRR) were used during the field activities to monitor air quality. A benzene gas monitor with a 9.8 eV lamp was available during field activities to monitor benzene levels, if necessary. Field instruments were calibrated prior to use each day in accordance with the manufacturer's specifications.

There were no PPE upgrades or exceedances of HASP action levels during the 4Q14 sampling event.

Decontamination

Field personnel and equipment underwent decontamination procedures to ensure the health and safety of those present, to maintain sample integrity, and to minimize cross contamination. Sampling equipment (e.g., groundwater pump) was decontaminated before and after each sample

location by spraying and/or wiping down with isopropyl alcohol, then washing with LiquiNox® and water, and finishing with a distilled water rinse. Interface probes were decontaminated by wiping down with isopropyl alcohol and LiquiNox® followed by a distilled water rinse. Personnel and small equipment decontamination were performed at the sample locations.

Investigation Derived Waste

Investigative derived waste (IDW), such as purge water and decontamination water generated during groundwater sampling activities, was collected, stored, and disposed in accordance with the Resource Conservation and Recovery Act (RCRA) and United States Department of Transportation (DOT) regulations. Expendable materials (e.g., disposable sampling equipment such as gloves and tubing) were decontaminated if necessary, collected in trash bags and disposed as municipal waste.

Decontamination fluids and purge water from groundwater monitoring wells MW-4, MW-7, MW-8, and MW-25 were staged in a 55-gallon steel drum at the Public Works Yard (satellite accumulation area) and removed by Heritage Environmental Services, LLC (Heritage) within 48 hours. This material is managed as hazardous waste based on prior characterization and was disposed at the Heritage facility in Indianapolis, Indiana.

Decontamination fluids and purge water from other groundwater monitoring wells in the Village were staged in 55-gallon steel drums located near the northeastern portion of the former Tannery Property. This material is managed as non-hazardous waste based on prior characterization and was disposed at the Heritage facility in Indianapolis, Indiana.

Decontamination fluid and purge water related to, or generated from, work within the WRR was collected and discharged through the WRR's National Pollutant Discharge Elimination System (NPDES)-permitted Wastewater Treatment Plant (WWTP).

2.4 GROUNDWATER SAMPLE HANDLING AND LABORATORY TESTING

Samples were collected in pre-preserved laboratory-supplied containers and labeled in the field. Sample information was recorded on a chain of custody (COC) form at the time of collection. The sample identification data (ID) format is "well ID-ROX-date". COCs are included with laboratory analytical reports in **Appendix C**.

Upon collection and labeling, sample containers were immediately placed inside an iced cooler, packed in such a way as to help prevent breakage and maintain inside temperature at or below 4°C. The samples were then delivered via overnight courier, under the proper COC documentation, to the laboratory for analysis.

Samples were analyzed by Accutest Laboratories in Marlborough, Massachusetts for VOCs via USEPA Methods 8260C and 8011, for SVOCs via USEPA Method 8270D, and for Polycyclic Aromatic Hydrocarbons (PAHs) via USEPA Method 8270D Low Level (LL). The 8011 method for VOCs (1,2-dibromoethane and 1,2-dibromo-3-chloropropane) was used in order to achieve lower reporting limits specified in the WRR RCRA Part B Permit (IEPA, 2013a), and the 8270D LL method was used for PAHs. Per direction from IEPA the Interim Groundwater Monitoring Program, concentration limits need to be consistent with those in the Permit. USEPA Method 8260C is the most current published version for Method 8260.

2.5 DATA QUALITY REVIEW AND DATA MANAGEMENT

Laboratory data were provided in electronic form and were independently reviewed and qualified by URS. One hundred percent of the data were subjected to a data quality review (Level III data review). Evaluation of the data followed procedures outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2014). The laboratory assigned data qualifiers on the basis of their quality control or to indicate sample analysis information. Data qualifiers were also added by URS, as appropriate, and are included on **Table 3** and the laboratory results in **Appendix C**. The results of the data review are discussed in **Section 3.2**.

Field data and documentation collected as part of this scope of work became part of the project file. URS maintains the files for the site, and the database management system.

The following documentation was completed and supplements the COC records:

- Field logbooks;
- Equipment calibration forms;
- Groundwater field gauging sheets;
- Groundwater field data sheets;
- Field sample collection data via electronic Toughbook®; and
- Safety documentation.

This section presents the results of the 4Q14 groundwater gauging and sampling event.

3.1 GROUNDWATER MONITORING WELL GAUGING RESULTS

Comprehensive quarterly groundwater monitoring well gauging for the 4Q14 event was conducted between October 1 and 3, 2014. This groundwater monitoring well gauging was conducted in accordance with the Interim Groundwater Monitoring Program and the data can be found in **Table 1a**. Groundwater levels in most wells in the Village have risen approximately 1 foot since 3Q14. Groundwater levels in most wells in the WRR have risen approximately 0.5 to 1 foot since 3Q14. Water levels continue to be above the top of the screens in many of the wells gauged during the 4Q14 event. The potentiometric surface observed during the 4Q14 groundwater monitoring well gauging (**Figures 3a and 3b**) illustrates groundwater flow toward the WRR groundwater depression wells. P66 began operating new groundwater production well W-89 on November 17, 2014. This well is shown on **Figures 3a** and **b**, east of the Public Works Yard. Because the well became operational after the 4Q14 gauging event, any effects this well may have on groundwater elevations will be depicted in the 1Q15 gauging event.

Perched groundwater was evaluated in the Village and in the WRR along the West Fenceline during 4Q14. During the 4Q14 event, groundwater was encountered in P-60-12S, P-60-13S, ROST-7-PZ, and ROST-21-PZ; and groundwater was not encountered in ROST-5-PZ or ROST-10-PZ. The 4Q14 gauging results for perched groundwater monitoring wells and piezometers can be found in **Table 1a**.

During the 4Q14 groundwater monitoring well gauging event, LNAPL was detected in three Roxana Interim Groundwater Monitoring Program groundwater monitoring wells (P-55, P-60, and P-68) that are located in the WRR **(Table 1a)**. In these wells, LNAPL thicknesses ranged from 0.08 to 0.21 feet. LNAPL was observed within the screened intervals of P-55 and P-60 and above the screened interval of P-68. During the weekly and monthly gauging events throughout 4Q14, LNAPL was detected in four groundwater monitoring wells located in the WRR (P-55, P-60, P-60-S, and P-68). This routine gauging data can be found in **Table 1b** and is summarized below.

Monitoring Well	Range in LNAPL Thickness (feet)	Comments
P-55	0.10-0.42	Observed each week
P-60	0.02-0.09	Observed in 13 of 14 weeks
P-60-S	0.38-0.73	Observed in 5 of 14 weeks
P-68	0.04-0.11	Observed in 13 of 14 weeks

LNAPL observed in groundwater monitoring wells located on the WRR property was removed for on-site reprocessing by P66. Removal of LNAPL, if observed exceeding the minimum thickness for recovery (0.10 feet) in the Village and WRR, is conducted during quarterly, monthly, and weekly gauging events. **Figures 4a and 4b** illustrate the measured LNAPL thickness observed along the west fence line and inside the refinery, respectively, during the 4Q14 gauging event.

3.2 DATA QUALITY REVIEW RESULTS

A total of twelve sample delivery groups (SDGs) were prepared and sent to Accutest Laboratories in Marlborough, MA for the 4Q14 event. Forty-seven different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). This included thirty-nine different investigative sample sets, four field duplicate sets, and two matrix spike/matrix spike duplicate (MS/MSD) sets. Additionally, well P-93D was sampled on October 15, 2014, and re-sampled, for confirmation, on November 4, 2014; results are presented in SDGs MC34365 and MC34842, respectively. These SDGs are presented in **Appendix C**.

Trip blanks (TBs), equipment blanks (EBs), and laboratory method blanks were analyzed to evaluate for the existence and magnitude of any contamination resulting from field and laboratory activities. Four different EB sets were collected for this quarter. A TB set was included in every cooler which contained samples for VOC analysis. A total of twelve TB sets were analyzed for groundwater VOCs. Laboratory method blanks were analyzed with every analytical batch.

Based on laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), surrogate, holding time, and field duplicate criteria, the groundwater results reported were accepted for their intended use. Compounds qualified by URS are specified in the data reviews presented in **Appendix C**. Additional information is provided in the data reviews and validation reports in **Appendix C**.

3.3 ANALYTICAL RESULTS AND DISCUSSION

Tables 2a and 2b present cumulative information on groundwater sampling field parameters for main aquifer and perched wells, respectively. These results are consistent with those observed in the 3Q14 sampling event. The laboratory analytical results for the groundwater samples collected during this event are presented in **Table 3**.

Analytical detections were compared to the concentration limits as provided in Condition IV(E) of the Permit for the WRB Refining LP Wood River Refinery[4]. These concentration limits include the Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 IAC 620, Subpart D), the IEPA Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route (35 IAC 742 Appendix B, Table E), and the IEPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables). The results of this comparison are presented in **Table 3**.

Samples from eighteen groundwater monitoring wells in the Interim Groundwater Monitoring Program exhibited exceedances of the groundwater screening criteria in one or more of the following constituents:

- Benzene
- Ethylbenzene
- MTBE
- n-Propylbenzene
- 1,3,5-Trimethylbenzene
- 2-Methylnaphthalene
- 1,2-Dichloropropane
- Isopropylbenzene
- Naphthalene
- Toluene
- Bis(2-Chloroethyl)ether
- Phenol

Figure 5 presents concentrations of analytes that exceeded the indicated screening criteria for 4Q14. **Figure 6** presents a plan view depiction of benzene analytical results in groundwater across the site. **Figure 7** presents a cross-section along Chaffer Street with a vertical distribution of the benzene concentrations in groundwater superimposed. **Figure 8** presents a cross-section across the Roxana Public Works Yard with a vertical distribution of the benzene analytical results in groundwater superimposed.

URS conducted the 4Q14 Roxana Interim Groundwater Monitoring Program, and the following conclusions are based on the data and information collected as part of this program.

- During 4Q14, groundwater level data indicates groundwater flow from the Investigation Area is moving toward groundwater depression wells at the WRR. Groundwater levels observed in the Village of Roxana were approximately 1 foot higher than in the previous

[4] IEPA requested that the Interim Groundwater Program be consistent with the RCRA Part B Permit.

quarter. Groundwater levels observed in the WRR were approximately 0.5 to 1 foot higher than in the previous quarter.

- Perched groundwater was evaluated at groundwater monitoring wells P-60-12S, P-60-13S, ROST-5-PZ, ROST-7-PZ, ROST-10-PZ, and ROST-21-PZ. During the evaluation, groundwater sampling could not be performed because slow recharge or lack of water prevented sampling per the SOP.
- The benzene analytical results from the newly installed groundwater monitoring wells (MW-25 through MW-28) were consistent with what would be expected based on the results from nearby wells. The new monitoring wells helped to refine the benzene contours (**Figure 6**) but did not change the overall shape of the contours.
- The analytical results from 4Q14 are generally similar to those from the previous quarter.

35 Illinois Administrative Code 620, Groundwater Quality. Subpart D. *Groundwater Quality Standards*.

35 Illinois Administrative Code 742, Tiered Approach to Corrective Action Objectives. Appendix B. *Table E – Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route*.

Illinois Environmental Protection Agency (IEPA) Toxicity Assessment Unit. *Chemicals Not in TACO, Tier 1 Tables*. http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html.

Illinois Environmental Protection Agency (IEPA), 2010 (IEPA, 2010); *Letter providing approval with comments the SOPUS 2010 Delineation Report*. Issued to Shell Oil Products US (SOPUS), dated August 5, 2010.

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-01											
1Q12	442.65	1/3/2012	NE	37.65	NA	NA	NA	405.00	393.85 - 383.85 (48.80 - 58.80)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	38.85	NA	NA	NA	403.80		0.0	*
3Q12		7/2/2012	NE	39.12	NA	NA	NA	403.53		0.0	*
4Q12		10/1/2012	NE	40.92	NA	NA	NA	401.73		0.0	*
1Q13		1/3/2013	NE	41.95	NA	NA	NA	400.70		0.0	*
2Q13		4/1/2013	NE	42.63	NA	NA	NA	400.02		54.0	*
3Q13		7/1/2013	NE	39.80	NA	NA	NA	402.85		8.7	*
4Q13		10/1/2013	NE	40.23	NA	NA	NA	402.42		0.0	*
1Q14		2/10/2014	NE	42.77	NA	NA	NA	399.88		5.8	*
2Q14		4/1/2014	NE	43.17	NA	NA	NA	399.48		18.9	*
3Q14		7/1/2014	NE	42.22	NA	NA	NA	400.43		1.3	*
4Q14		10/1/2014	NE	41.11	NA	NA	NA	401.54		0.0	*
MW-02											
1Q12	443.77	1/3/2012	NE	38.88	NA	NA	NA	404.89	393.90 - 383.90 (49.87 - 59.87)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	40.04	NA	NA	NA	403.73		334.0	*
3Q12		7/2/2012	NE	40.32	NA	NA	NA	403.45		182.0	*
4Q12		10/1/2012	NE	42.10	NA	NA	NA	401.67		13.0	*
1Q13		1/3/2013	NE	43.10	NA	NA	NA	400.67		54.7	*
2Q13		4/1/2013	NE	43.81	NA	NA	NA	399.96		232.0	*
3Q13		7/1/2013	NE	41.15	NA	NA	NA	402.62		208.0	*
4Q13		10/1/2013	NE	41.56	NA	NA	NA	402.21		109.7	*
1Q14		2/10/2014	NE	44.00	NA	NA	NA	399.77		98.7	*
2Q14		4/1/2014	NE	44.45	NA	NA	NA	399.32		50.0	*
3Q14		7/1/2014	NE	43.45	NA	NA	NA	400.32		119.0	*
4Q14		10/1/2014	NE	42.37	NA	NA	NA	401.40		130.1	*
MW-03											
1Q12	430.08	1/3/2012	NE	24.84	NA	NA	NA	405.24	395.41 - 385.41 (34.67 - 44.67)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	26.04	NA	NA	NA	404.04		0.0	*
3Q12		7/2/2012	NE	26.30	NA	NA	NA	403.78		0.0	*
4Q12		10/1/2012	NE	28.13	NA	NA	NA	401.95		0.0	*
1Q13		1/3/2013	NE	29.22	NA	NA	NA	400.86		0.0	*
2Q13		4/1/2013	NE	29.88	NA	NA	NA	400.20		3.5	*
3Q13		7/1/2013	NE	26.65	NA	NA	NA	403.43		0.4	*
4Q13		10/2/2013	NE	27.21	NA	NA	NA	402.87		0.0	*
1Q14		2/10/2014	NE	29.91	NA	NA	NA	400.17		2.5	*
2Q14		4/1/2014	NE	30.30	NA	NA	NA	399.78		0.3	*
3Q14		7/1/2014	NE	29.26	NA	NA	NA	400.82		1.2	*
4Q14		10/1/2014	NE	28.14	NA	NA	NA	401.94		0.0	*
MW-04											
1Q12	441.14	1/3/2012	NE	35.97	NA	NA	NA	405.17	395.08 - 385.08 (46.06 - 56.06)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	37.11	NA	NA	NA	404.03		157.0	*
3Q12		7/2/2012	NE	37.43	NA	NA	NA	403.71		24.0	*
4Q12		10/1/2012	NE	39.27	NA	NA	NA	401.87		48.6	*
1Q13		1/3/2013	NE	40.27	NA	NA	NA	400.87		35.3	*
2Q13		4/1/2013	NE	41.00	NA	NA	NA	400.14		104.0	*
3Q13		7/1/2013	NE	38.07	NA	NA	NA	403.07		131.6	*
4Q13		10/2/2013	NE	38.49	NA	NA	NA	402.65		39.4	*
1Q14		2/10/2014	NE	41.09	NA	NA	NA	400.05		52.3	*
2Q14		4/1/2014	NE	41.52	NA	NA	NA	399.62		75.0	*
3Q14		7/1/2014	NE	40.50	NA	NA	NA	400.64		97.2	*
4Q14		10/1/2014	NE	39.44	NA	NA	NA	401.70		27.4	*
MW-05											
1Q12	429.80	1/3/2012	NE	24.45	NA	NA	NA	405.35	395.83 - 385.83 (33.97 - 43.97)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	25.65	NA	NA	NA	404.15		0.0	*
3Q12		7/2/2012	NE	25.91	NA	NA	NA	403.89		0.0	*
4Q12		10/1/2012	NE	27.80	NA	NA	NA	402.00		0.0	*
1Q13		1/3/2013	NE	28.86	NA	NA	NA	400.94		0.0	*
2Q13		4/1/2013	NE	29.53	NA	NA	NA	400.27		0.1	*
3Q13		7/1/2013	NE	26.37	NA	NA	NA	403.43		1.0	*
4Q13		10/2/2013	NE	26.85	NA	NA	NA	402.95		0.0	*
1Q14		2/10/2014	NE	29.59	NA	NA	NA	400.21		1.4	*
2Q14		4/1/2014	NE	29.96	NA	NA	NA	399.84		0.0	*
3Q14		7/2/2014	NE	28.93	NA	NA	NA	400.87		0.3	*
4Q14		10/2/2014	NE	27.74	NA	NA	NA	402.06		0.0	*
MW-06A											
1Q12	432.14	1/3/2012	NE	26.34	NA	NA	NA	405.80	397.31 - 387.31 (34.83 - 44.83)	0.0	*1" Piezometer replaced with a 2" monitoring well
2Q12		4/2/2012	NE	27.57	NA	NA	NA	404.57		0.0	*
3Q12		7/2/2012	NE	27.88	NA	NA	NA	404.26		0.0	*
4Q12		10/1/2012	NE	28.81	NA	NA	NA	403.33		0.0	*
1Q13		1/3/2013	NE	30.80	NA	NA	NA	401.34		0.0	*
2Q13		4/1/2013	NE	31.57	NA	NA	NA	400.57		0.1	*
3Q13		7/1/2013	NE	28.48	NA	NA	NA	403.66		0.6	*
4Q13		10/2/2013	NE	28.75	NA	NA	NA	403.39		0.0	*
1Q14		2/10/2014	NE	31.62	NA	NA	NA	400.52		2.3	*
2Q14		4/1/2014	NE	32.03	NA	NA	NA	400.11		10.4	*
3Q14		7/1/2014	NE	30.90	NA	NA	NA	401.24		1.4	*
4Q14		10/2/2014	NE	29.74	NA	NA	NA	402.40		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-06B											
1Q12	432.29	1/3/2012	NE	26.40	NA	NA	NA	405.89	368.24 - 363.24 (64.05 - 69.05)	0.0	*
2Q12		4/2/2012	NE	27.61	NA	NA	NA	404.68		0.0	*
3Q12		7/2/2012	NE	27.92	NA	NA	NA	404.37		0.0	*
4Q12		10/1/2012	NE	29.86	NA	NA	NA	402.43		0.0	*
1Q13		1/3/2013	NE	30.87	NA	NA	NA	401.42		0.0	*
2Q13		4/1/2013	NE	31.63	NA	NA	NA	400.66		2.7	*
3Q13		7/1/2013	NE	28.53	NA	NA	NA	403.76		0.0	*
4Q13		10/2/2013	NE	28.80	NA	NA	NA	403.49		0.5	*
1Q14		2/10/2014	NE	31.67	NA	NA	NA	400.62		6.0	*
2Q14		4/1/2014	NE	32.10	NA	NA	NA	400.19		4.8	*
3Q14		7/1/2014	NE	30.93	NA	NA	NA	401.36		2.1	*
4Q14		10/2/2014	NE	29.78	NA	NA	NA	402.51		0.0	*
MW-06C											
1Q12	432.11	1/3/2012	NE	26.17	NA	NA	NA	405.94	347.16 - 342.16 (84.95 - 89.95)	0.0	*
2Q12		4/2/2012	NE	27.40	NA	NA	NA	404.71		0.0	*
3Q12		7/2/2012	NE	27.71	NA	NA	NA	404.40		0.0	*
4Q12		10/1/2012	NE	29.70	NA	NA	NA	402.41		0.0	*
1Q13		1/3/2013	NE	30.65	NA	NA	NA	401.46		0.0	*
2Q13		4/1/2013	NE	31.40	NA	NA	NA	400.71		1.1	*
3Q13		7/1/2013	NE	28.32	NA	NA	NA	403.79		0.2	*
4Q13		10/2/2013	NE	28.58	NA	NA	NA	403.53		0.0	*
1Q14		2/10/2014	NE	31.48	NA	NA	NA	400.63		3.8	*
2Q14		4/1/2014	NE	31.89	NA	NA	NA	400.22		2.5	*
3Q14		7/1/2014	NE	30.74	NA	NA	NA	401.37		2.1	*
4Q14		10/2/2014	NE	29.58	NA	NA	NA	402.53		0.0	*
MW-06D											
1Q12	431.99	1/3/2012	NE	26.05	NA	NA	NA	405.94	327.27 - 322.27 (104.72 - 109.72)	0.0	*
2Q12		4/2/2012	NE	27.46	NA	NA	NA	404.53		0.0	*
3Q12		7/2/2012	NE	27.58	NA	NA	NA	404.41		0.0	*
4Q12		10/1/2012	NE	29.51	NA	NA	NA	402.48		0.0	*
1Q13		1/3/2013	NE	30.51	NA	NA	NA	401.48		0.0	*
2Q13		4/1/2013	NE	31.26	NA	NA	NA	400.73		4.2	*
3Q13		7/1/2013	NE	28.17	NA	NA	NA	403.82		0.7	*
4Q13		10/2/2013	NE	28.45	NA	NA	NA	403.54		0.0	*
1Q14		2/10/2014	NE	31.33	NA	NA	NA	400.66		1.3	*
2Q14		4/1/2014	NE	31.73	NA	NA	NA	400.26		1.6	*
3Q14		7/1/2014	NE	30.58	NA	NA	NA	401.41		13.3	*
4Q14		10/2/2014	NE	29.43	NA	NA	NA	402.56		0.0	*
MW-07											
1Q12	443.10	1/3/2012	NE	37.79	NA	NA	NA	405.31	400.18 - 390.18 (42.92 - 52.92)	20.0	*
2Q12		4/2/2012	NE	38.91	NA	NA	NA	404.19		0.0	*
3Q12		7/2/2012	NE	39.23	NA	NA	NA	403.87		5.6	*
4Q12		10/1/2012	NE	41.10	NA	NA	NA	402.00		0.0	*
1Q13		1/3/2013	NE	42.10	NA	NA	NA	401.00		0.0	*
2Q13		4/1/2013	NE	42.90	NA	NA	NA	400.20		0.0	*
3Q13		7/1/2013	NE	40.08	NA	NA	NA	403.02		357.0	*
4Q13		10/2/2013	NE	40.33	NA	NA	NA	402.77		OVR	*
1Q14		2/10/2014	NE	42.94	NA	NA	NA	400.16		720.3	
2Q14		4/3/2014	NE	43.41	NA	NA	NA	399.69		6.2	
3Q14		7/1/2014	NE	42.39	NA	NA	NA	400.71		170.1	*
4Q14		10/1/2014	NE	41.32	NA	NA	NA	401.78		4259.0	*
MW-08											
1Q12	434.11	1/3/2012	NE	28.84	NA	NA	NA	405.27	400.51 - 390.51 (33.60 - 43.60)	35.0	*
2Q12		4/2/2012	NE	30.01	NA	NA	NA	404.10		34.0	*
3Q12		7/2/2012	NE	30.29	NA	NA	NA	403.82		9.2	*
4Q12		10/1/2012	NE	32.17	NA	NA	NA	401.94		0.0	*
1Q13		1/3/2013	NE	33.21	NA	NA	NA	400.90		11.2	*
2Q13		4/1/2013	NE	33.94	NA	NA	NA	400.17		0.2	
3Q13		7/1/2013	NE	30.90	NA	NA	NA	403.21		883.0	*
4Q13		10/2/2013	NE	31.26	NA	NA	NA	402.85		684.6	*
1Q14		2/10/2014	NE	34.02	NA	NA	NA	400.09		7.2	
2Q14		4/3/2014	NE	34.36	NA	NA	NA	399.75		2.8	
3Q14		7/2/2014	NE	33.35	NA	NA	NA	400.76		13.2	*
4Q14		10/2/2014	NE	32.19	NA	NA	NA	401.92		102.7	*
MW-09											
1Q12	445.20	1/3/2012	NE	39.50	NA	NA	NA	405.70	398.75 - 388.75 (46.45 - 56.45)	0.0	*
2Q12		4/2/2012	NE	40.77	NA	NA	NA	404.43		0.0	*
3Q12		7/2/2012	NE	40.07	NA	NA	NA	405.13		0.0	*
4Q12		10/1/2012	NE	42.75	NA	NA	NA	402.45		0.0	*
1Q13		1/2/2013	NE	43.92	NA	NA	NA	401.28		0.0	*
2Q13		4/1/2013	NE	44.76	NA	NA	NA	400.44		0.8	*
3Q13		7/1/2013	NE	42.35	NA	NA	NA	402.85		0.8	*
4Q13		10/1/2013	NE	42.29	NA	NA	NA	402.91		0.0	*
1Q14		2/10/2014	NE	44.47	NA	NA	NA	400.73		0.6	*
2Q14		4/1/2014	NE	44.95	NA	NA	NA	400.25		1.7	*
3Q14		7/1/2014	NE	44.49	NA	NA	NA	400.71		0.0	*
4Q14		10/1/2014	NE	43.54	NA	NA	NA	401.66		0.3	*

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TABLE 1a
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WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-10											
1Q12	445.03	1/3/2012	NE	39.39	NA	NA	NA	405.64	400.60 - 390.60 (44.43 - 54.43)	0.0	*
2Q12		4/2/2012	NE	40.58	NA	NA	NA	404.45		16.0	*
3Q12		7/2/2012	NE	40.92	NA	NA	NA	404.11		0.0	*
4Q12		10/1/2012	NE	42.69	NA	NA	NA	402.34		0.0	*
1Q13		1/2/2013	NE	43.81	NA	NA	NA	401.22		0.0	*
2Q13		4/1/2013	NE	44.72	NA	NA	NA	400.31		0.0	
3Q13		7/1/2013	NE	42.55	NA	NA	NA	402.48		13.4	*
4Q13		10/1/2013	NE	42.45	NA	NA	NA	402.58		0.0	*
1Q14		2/10/2014	NE	44.42	NA	NA	NA	400.61		0.4	*
2Q14		4/1/2014	NE	44.99	NA	NA	NA	400.04		177.6	
3Q14		7/1/2014	NE	44.55	NA	NA	NA	400.48		0.0	
4Q14		10/1/2014	NE	43.65	NA	NA	NA	401.38		0.2	*
MW-11											
1Q12	442.33	1/3/2012	NE	37.21	NA	NA	NA	405.12	400.67 - 390.67 (41.66 - 51.66)	0.0	*
2Q12		4/2/2012	NE	38.44	NA	NA	NA	403.89		0.0	*
3Q12		7/2/2012	NE	38.68	NA	NA	NA	403.65		0.0	*
4Q12		10/1/2012	NE	40.42	NA	NA	NA	401.91		0.0	*
1Q13		1/2/2013	NE	41.49	NA	NA	NA	400.84		0.0	*
2Q13		4/1/2013	NE	42.18	NA	NA	NA	400.15		2.3	
3Q13		7/1/2013	NE	39.49	NA	NA	NA	402.84		0.3	*
4Q13		10/1/2013	NE	39.84	NA	NA	NA	402.49		0.0	*
1Q14		2/10/2014	NE	42.16	NA	NA	NA	400.17		0.3	
2Q14		4/1/2014	NE	42.55	NA	NA	NA	399.78		0.0	
3Q14		7/1/2014	NE	41.92	NA	NA	NA	400.41		0.0	
4Q14		10/1/2014	NE	39.93	NA	NA	NA	402.40		0.0	*
MW-12											
1Q12	442.60	1/3/2012	NE	37.57	NA	NA	NA	405.03	400.68 - 390.68 (41.92 - 51.92)	0.0	*
2Q12		4/2/2012	NE	38.75	NA	NA	NA	403.85		0.0	*
3Q12		7/2/2012	NE	39.01	NA	NA	NA	403.59		0.0	*
4Q12		10/1/2012	NE	40.78	NA	NA	NA	401.82		0.0	*
1Q13		1/3/2013	NE	41.86	NA	NA	NA	400.74		0.0	*
2Q13		4/1/2013	NE	42.46	NA	NA	NA	400.14		0.0	
3Q13		7/1/2013	NE	39.57	NA	NA	NA	403.03		1.2	*
4Q13		10/1/2013	NE	40.05	NA	NA	NA	402.55		0.0	*
1Q14		2/10/2014	NE	42.54	NA	NA	NA	400.06		1.5	
2Q14		4/2/2014	NE	42.97	NA	NA	NA	399.63		0.7	
3Q14		7/1/2014	NE	42.10	NA	NA	NA	400.50		1.1	
4Q14		10/1/2014	NE	41.02	NA	NA	NA	401.58		0.0	*
MW-13											
1Q12	430.27	1/3/2012	NE	24.35	NA	NA	NA	405.92	404.70 - 394.70 (25.57 - 35.57)	0.0	*
2Q12		4/2/2012	NE	25.48	NA	NA	NA	404.79		0.0	*
3Q12		7/3/2012	NE	25.95	NA	NA	NA	404.32		0.0	
4Q12		10/2/2012	NE	27.99	NA	NA	NA	402.28		0.0	
1Q13		1/7/2013	NE	29.07	NA	NA	NA	401.20		24.0	
2Q13		4/2/2013	NE	29.62	NA	NA	NA	400.65		0.0	
3Q13		7/2/2013	NE	25.97	NA	NA	NA	404.30		2.9	
4Q13		10/2/2013	NE	26.69	NA	NA	NA	403.58		54.8	
1Q14		2/11/2014	NE	29.63	NA	NA	NA	400.64		10.1	
2Q14		4/4/2014	NE	30.11	NA	NA	NA	400.16		0.2	
3Q14		7/2/2014	NE	28.72	NA	NA	NA	401.55		1.1	
4Q14		10/3/2014	NE	27.66	NA	NA	NA	402.61		0.4	
MW-14											
1Q12	434.44	1/1/2012	NM	NM	NA	NA	NA	NA	401.02 - 391.02 (33.42 - 43.42)	NM	
2Q12		5/10/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/5/2012	NE	29.87	NA	NA	NA	404.57		0.0	*
4Q12		10/2/2012	NE	31.86	NA	NA	NA	402.58		17.8	*
1Q13		1/7/2013	NE	32.71	NA	NA	NA	401.73		26.0	*
2Q13		4/2/2013	NE	33.68	NA	NA	NA	400.76		44.3	
3Q13		7/2/2013	NE	30.69	NA	NA	NA	403.75		7.4	*
4Q13		10/2/2013	NE	30.58	NA	NA	NA	403.86		20.5	*
1Q14		2/11/2014	NE	33.67	NA	NA	NA	400.77		45.1	
2Q14		4/4/2014	NE	34.21	NA	NA	NA	400.23		50.2	
3Q14		7/2/2014	NE	33.03	NA	NA	NA	401.41		52.0	*
4Q14		10/3/2014	NE	31.93	NA	NA	NA	402.51		83.3	*
MW-16											
1Q13	443.39	1/23/2013	NE	43.05	NA	NA	NA	400.34	406.33 - 396.33 (37.06 - 47.06)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	43.55	NA	NA	NA	399.84		0.0	
3Q13		7/1/2013	NE	40.86	NA	NA	NA	402.53		0.0	
4Q13		10/1/2013	NE	41.43	NA	NA	NA	401.96		0.0	
1Q14		2/10/2014	NE	43.76	NA	NA	NA	399.63		0.5	
2Q14		4/1/2014	NE	44.19	NA	NA	NA	399.20		0.6	
3Q14		7/1/2014	NE	43.45	NA	NA	NA	399.94		0.0	
4Q14		10/1/2014	NE	42.35	NA	NA	NA	401.04		0.0	
MW-17											
1Q13	441.57	2/11/2013	NE	41.75	NA	NA	NA	399.82	407.28 - 392.28 (34.29 - 49.29)	0.2	Installed during 4Q12
2Q13		4/1/2013	NE	41.85	NA	NA	NA	399.72		0.5	
3Q13		7/1/2013	NE	39.42	NA	NA	NA	402.15		0.0	
4Q13		10/1/2013	NE	40.18	NA	NA	NA	401.39		0.0	
1Q14		2/10/2014	NE	42.25	NA	NA	NA	399.32		0.0	
2Q14		4/3/2014	NE	42.76	NA	NA	NA	398.81		2.1	
3Q14		7/1/2014	NE	41.92	NA	NA	NA	399.65		0.0	
4Q14		10/1/2014	NE	41.07	NA	NA	NA	400.50		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-18											
1Q13	442.04	2/11/2013	NE	42.25	NA	NA	NA	399.79	407.12 - 392.12 (34.92 - 49.92)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	42.38	NA	NA	NA	399.66		0.0	
3Q13		7/1/2013	NE	39.89	NA	NA	NA	402.15		0.0	
4Q13		10/1/2013	NE	40.85	NA	NA	NA	401.19		0.0	
1Q14		2/11/2014	NE	42.85	NA	NA	NA	399.19		0.0	
2Q14		4/1/2014	NE	43.41	NA	NA	NA	398.63		0.0	
3Q14		7/1/2014	NE	42.49	NA	NA	NA	399.55		0.9	
4Q14		10/1/2014	NE	41.67	NA	NA	NA	400.37		0.0	
MW-19											
1Q13	442.77	2/11/2013	NE	42.88	NA	NA	NA	399.89	406.43 - 391.43 (36.34 - 51.34)	0.9	Installed during 4Q12
2Q13		4/1/2013	NE	43.04	NA	NA	NA	399.73		10.3	
3Q13		7/1/2013	NE	40.50	NA	NA	NA	402.27		0.0	
4Q13		10/2/2013	NE	41.24	NA	NA	NA	401.53		0.0	
1Q14		2/10/2014	NE	43.41	NA	NA	NA	399.36		0.9	
2Q14		4/1/2014	NE	43.92	NA	NA	NA	398.85		0.0	
3Q14		7/1/2014	NE	42.92	NA	NA	NA	399.85		0.6	
4Q14		10/1/2014	NE	42.02	NA	NA	NA	400.75		0.0	
MW-20											
1Q13	443.67	2/11/2013	NE	43.66	NA	NA	NA	400.01	407.79 - 392.79 (35.88 - 50.88)	0.0	Installed during 4Q12
2Q13		4/1/2013	NE	43.89	NA	NA	NA	399.78		0.1	
3Q13		7/1/2013	NE	41.23	NA	NA	NA	402.44		0.0	
4Q13		10/1/2013	NE	41.77	NA	NA	NA	401.90		0.0	
1Q14		2/10/2014	NE	44.09	NA	NA	NA	399.58		1.4	
2Q14		4/2/2014	NE	44.65	NA	NA	NA	399.02		0.0	
3Q14		7/1/2014	NE	43.64	NA	NA	NA	400.03		1.3	
4Q14		10/1/2014	NE	42.63	NA	NA	NA	401.04		0.0	
MW-21											
1Q13	443.81	2/11/2013	NE	43.53	NA	NA	NA	400.28	408.80 - 393.80 (35.01 - 50.01)	0.1	Installed during 4Q12
2Q13		4/1/2013	NE	43.79	NA	NA	NA	400.02		0.3	
3Q13		7/1/2013	NE	41.05	NA	NA	NA	402.76		0.0	
4Q13		10/2/2013	NE	41.40	NA	NA	NA	402.41		0.0	
1Q14		2/10/2014	NE	43.91	NA	NA	NA	399.90		32.5	
2Q14		4/3/2014	NE	44.38	NA	NA	NA	399.43		1.8	
3Q14		7/2/2014	NE	43.38	NA	NA	NA	400.43		0.0	
4Q14		10/1/2014	NE	42.28	NA	NA	NA	401.53		0.0	
MW-22											
1Q13	442.16	1/23/2013	NE	41.80	NA	NA	NA	400.36	404.28 - 394.28 (37.88 - 47.88)	2.0	Installed during 4Q12
2Q13		4/1/2013	NE	42.31	NA	NA	NA	399.85		2.8	
3Q13		7/5/2013	NE	39.60	NA	NA	NA	402.56		0.6	
4Q13		10/1/2013	NE	40.23	NA	NA	NA	401.93		0.0	
1Q14		2/10/2014	NE	42.49	NA	NA	NA	399.67		0.3	
2Q14		4/3/2014	NE	42.90	NA	NA	NA	399.26		0.2	
3Q14		7/1/2014	NE	42.18	NA	NA	NA	399.98		0.1	
4Q14		10/1/2014	NE	41.20	NA	NA	NA	400.96		0.0	
MW-24											
2Q13	443.42	4/1/2013	NE	43.44	NA	NA	NA	399.98	404.53 - 394.53 (38.89 - 48.89)	0.5	Installed during 1Q13
3Q13		7/3/2013	NE	40.59	NA	NA	NA	402.83		0.0	
4Q13		10/1/2013	NE	41.08	NA	NA	NA	402.34		134.4	
1Q14		2/10/2014	NE	43.47	NA	NA	NA	399.95		14.2	
2Q14		4/1/2014	NE	43.86	NA	NA	NA	399.56		4.9	
3Q14		7/1/2014	NE	43.15	NA	NA	NA	400.27		0.0	
4Q14		10/1/2014	NE	42.13	NA	NA	NA	401.29		13.8	
MW-25											
4Q14	438.35	10/1/2014	NE	36.50	NA	NA	NA	401.85	402.76 - 392.76 (35.59 - 45.59)	0.0	
MW-26											
4Q14	441.02	10/2/2014	NE	39.41	NA	NA	NA	401.61	402.87 - 392.87 (38.15 - 48.15)	8.2	
MW-28											
4Q14	443.34	10/1/2014	NE	41.10	NA	NA	NA	402.24	409.73 - 399.73 (33.61 - 43.61)	0.0	
P-01											
1Q12	442.56	1/3/2012	NE	28.93	NA	NA	NA	413.63	380.61 - 375.61 (61.95 - 66.95)	NA	*
2Q12		4/2/2012	NE	29.38	NA	NA	NA	413.18		0.0	*
3Q12		7/2/2012	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q12		10/1/2012	NE	32.35	NA	NA	NA	410.21		0.0	*
1Q13		1/3/2013	NE	33.96	NA	NA	NA	408.60		0.0	*
2Q13		4/1/2013	NE	33.68	NA	NA	NA	408.88		0.4	*
3Q13		7/3/2013	NE	30.60	NA	NA	NA	411.96		0.0	*
4Q13		10/1/2013	NE	33.13	NA	NA	NA	409.43		0.6	*
1Q14		2/12/2014	NE	35.21	NA	NA	NA	407.35		0.1	*
2Q14		4/2/2014	NE	35.61	NA	NA	NA	406.95		0.0	*
3Q14		7/3/2014	NE	34.33	NA	NA	NA	408.23		0.2	*
4Q14		10/1/2014	NE	33.96	NA	NA	NA	408.60		0.0	*
P-4U											
1Q12	442.50	1/3/2012	NE	40.32	NA	NA	NA	402.18	361.35 - 359.35 (81.15 - 83.15)	NA	*
2Q12		4/2/2012	NE	30.80	NA	NA	NA	411.70		0.0	*
3Q12		7/2/2012	NE	31.70	NA	NA	NA	410.80		0.0	*
4Q12		10/1/2012	NE	33.65	NA	NA	NA	408.85		0.5	*
1Q13		1/3/2013	NE	35.10	NA	NA	NA	407.40		0.0	*
2Q13		4/1/2013	NE	35.95	NA	NA	NA	406.55		0.5	*
3Q13		7/3/2013	NE	32.80	NA	NA	NA	409.70		0.0	*
4Q13		10/1/2013	NE	34.72	NA	NA	NA	407.78		0.2	*
1Q14		2/12/2014	NE	36.76	NA	NA	NA	405.74		51.0	*
2Q14		4/4/2014	NE	39.91	NA	NA	NA	402.59		0.2	*
3Q14		7/3/2014	NE	36.64	NA	NA	NA	405.86		0.0	*
4Q14		10/1/2014	NE	36.22	NA	NA	NA	406.28		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-5L											
1Q12	443.79	1/3/2012	NE	30.42	NA	NA	NA	413.37	303.39 - 301.39 (140.40 - 142.40)	NA	*
2Q12		4/2/2012	NE	30.56	NA	NA	NA	413.23		0.9	*
3Q12		7/2/2012	NE	31.60	NA	NA	NA	412.19		0.0	*
4Q12		10/1/2012	NE	33.60	NA	NA	NA	410.19		0.0	*
1Q13		1/3/2013	NE	35.17	NA	NA	NA	408.62		0.0	*
2Q13		4/1/2013	NE	35.84	NA	NA	NA	407.95		0.0	*
3Q13		7/3/2013	NE	31.51	NA	NA	NA	412.28		0.0	*
4Q13		10/1/2013	NE	34.35	NA	NA	NA	409.44		0.4	*
1Q14		2/12/2014	NE	36.88	NA	NA	NA	406.91		0.2	*
2Q14		4/4/2014	NE	41.40	NA	NA	NA	402.39		2.0	*
3Q14		7/3/2014	NE	36.65	NA	NA	NA	407.14		0.0	*
4Q14		10/1/2014	NE	36.38	NA	NA	NA	407.41		0.0	*
P-5U											
1Q12	444.15	1/3/2012	NE	30.42	NA	NA	NA	413.73	313.52 - 311.52 (130.63 - 132.63)	NA	*
2Q12		4/2/2012	NE	31.96	NA	NA	NA	412.19		0.9	*
3Q12		7/2/2012	NE	32.80	NA	NA	NA	411.35		0.8	*
4Q12		10/1/2012	NE	35.00	NA	NA	NA	409.15		0.8	*
1Q13		1/3/2013	NE	36.41	NA	NA	NA	407.74		0.0	*
2Q13		4/1/2013	NE	37.24	NA	NA	NA	406.91		0.0	*
3Q13		7/3/2013	NE	33.53	NA	NA	NA	410.62		0.0	*
4Q13		10/1/2013	NE	35.88	NA	NA	NA	408.27		0.0	*
1Q14		2/12/2014	NE	38.00	NA	NA	NA	406.15		0.5	*
2Q14		4/4/2014	NE	50.04	NA	NA	NA	394.11		0.2	*
3Q14		7/3/2014	NE	37.95	NA	NA	NA	406.20		0.0	*
4Q14		10/1/2014	NE	37.56	NA	NA	NA	406.59		0.0	*
P-6L											
1Q12	443.20	1/3/2012	NE	30.21	NA	NA	NA	412.99	353.20 - 351.20 (90.00 - 92.00)	NA	*
2Q12		4/2/2012	NE	30.38	NA	NA	NA	412.82		0.0	*
3Q12		7/2/2012	NE	31.18	NA	NA	NA	412.02		0.0	*
4Q12		10/1/2012	NE	33.45	NA	NA	NA	409.75		0.2	*
1Q13		1/3/2013	NE	35.00	NA	NA	NA	408.20		0.0	*
2Q13		4/1/2013	NE	35.19	NA	NA	NA	408.01		0.0	*
3Q13		7/3/2013	NE	31.66	NA	NA	NA	411.54		0.0	*
4Q13		10/1/2013	NE	33.97	NA	NA	NA	409.23		0.1	*
1Q14		2/12/2014	NE	36.27	NA	NA	NA	406.93		21.8	*
2Q14		4/4/2014	NE	36.88	NA	NA	NA	406.32		0.2	*
3Q14		7/3/2014	NE	36.04	NA	NA	NA	407.16		0.0	*
4Q14		10/1/2014	NE	35.75	NA	NA	NA	407.45		0.0	*
P-6U											
1Q12	443.35	1/3/2012	NE	30.97	NA	NA	NA	412.38	362.85 - 360.85 (80.50 - 82.50)	NA	*
2Q12		4/2/2012	NE	31.42	NA	NA	NA	411.93		0.0	*
3Q12		7/2/2012	NE	32.25	NA	NA	NA	411.10		0.0	*
4Q12		10/1/2012	NE	30.40	NA	NA	NA	412.95		0.2	*
1Q13		1/3/2013	NE	35.86	NA	NA	NA	407.49		0.0	*
2Q13		4/1/2013	NE	36.88	NA	NA	NA	406.47		0.0	*
3Q13		7/3/2013	NE	33.17	NA	NA	NA	410.18		0.0	*
4Q13		10/1/2013	NE	35.31	NA	NA	NA	408.04		0.1	*
1Q14		2/12/2014	NE	37.45	NA	NA	NA	405.90		0.7	*
2Q14		4/4/2014	NE	42.10	NA	NA	NA	401.25		1.5	*
3Q14		7/3/2014	NE	37.52	NA	NA	NA	405.83		0.1	*
4Q14		10/1/2014	NE	37.17	NA	NA	NA	406.18		0.0	*
P-7L											
1Q12	443.42	1/3/2012	NE	30.91	NA	NA	NA	412.51	373.42 - 371.42 (70.00 - 72.00)	NA	*
2Q12		4/2/2012	NE	31.28	NA	NA	NA	412.14		0.0	*
3Q12		7/2/2012	NE	32.60	NA	NA	NA	410.82		0.0	*
4Q12		10/1/2012	NE	33.98	NA	NA	NA	409.44		0.0	*
1Q13		1/3/2013	NE	35.77	NA	NA	NA	407.65		0.0	*
2Q13		4/1/2013	NE	36.17	NA	NA	NA	407.25		0.0	*
3Q13		7/3/2013	NE	32.73	NA	NA	NA	410.69		0.0	*
4Q13		10/1/2013	NE	34.70	NA	NA	NA	408.72		0.8	*
1Q14		2/12/2014	NE	36.92	NA	NA	NA	406.50		1.1	*
2Q14		4/2/2014	NE	37.76	NA	NA	NA	405.66		29.9	*
3Q14		7/3/2014	NE	36.97	NA	NA	NA	406.45		0.0	*
4Q14		10/1/2014	NE	36.70	NA	NA	NA	406.72		0.0	*
P-7U											
1Q12	443.80	1/3/2012	NE	31.23	NA	NA	NA	412.57	382.72 - 380.72 (61.08 - 63.08)	NA	*
2Q12		4/2/2012	NE	31.63	NA	NA	NA	412.17		0.0	*
3Q12		7/2/2012	NE	31.86	NA	NA	NA	411.94		0.0	*
4Q12		10/1/2012	NE	34.55	NA	NA	NA	409.25		0.0	*
1Q13		1/3/2013	NE	36.12	NA	NA	NA	407.68		0.0	*
2Q13		4/1/2013	NE	37.12	NA	NA	NA	406.68		0.0	*
3Q13		7/3/2013	NE	33.11	NA	NA	NA	410.69		0.0	*
4Q13		10/1/2013	NE	35.54	NA	NA	NA	408.26		0.1	*
1Q14		2/12/2014	NE	37.76	NA	NA	NA	406.04		2.0	*
2Q14		4/2/2014	NE	43.67	NA	NA	NA	400.13		0.2	*
3Q14		7/3/2014	NE	37.81	NA	NA	NA	405.99		0.3	*
4Q14		10/1/2014	NE	37.52	NA	NA	NA	406.28		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-8L											
1Q12	443.10	1/3/2012	NE	30.92	NA	NA	NA	412.18	373.10 - 371.10 (70.00 - 72.00)	NA	*
2Q12		4/2/2012	NE	31.22	NA	NA	NA	411.88		0.0	*
3Q12		7/2/2012	NE	31.81	NA	NA	NA	411.29		0.0	*
4Q12		10/1/2012	NE	33.74	NA	NA	NA	409.36		0.0	*
1Q13		1/3/2013	NE	35.49	NA	NA	NA	407.61		0.0	*
2Q13		4/1/2013	NE	36.23	NA	NA	NA	406.87		0.0	*
3Q13		7/3/2013	NE	33.89	NA	NA	NA	409.21		0.0	*
4Q13		10/1/2013	NE	34.75	NA	NA	NA	408.35		0.0	*
1Q14		2/12/2014	NE	36.57	NA	NA	NA	406.53		0.9	*
2Q14		4/1/2014	NE	37.59	NA	NA	NA	405.51		0.0	*
3Q14		7/1/2014	NE	37.00	NA	NA	NA	406.10		0.0	*
4Q14		10/3/2014	NE	38.28	NA	NA	NA	404.82		0.0	*
P-8U											
1Q12	441.87	1/3/2012	NE	30.99	NA	NA	NA	410.88	382.35 - 380.35 (59.52 - 61.52)	NA	*
2Q12		4/2/2012	NE	31.73	NA	NA	NA	410.14		0.0	*
3Q12		7/1/2012	NE	32.51	NA	NA	NA	409.36		0.0	*
4Q12		10/1/2012	NE	34.77	NA	NA	NA	407.10		0.2	*
1Q13		1/3/2013	NE	35.97	NA	NA	NA	405.90		0.0	*
2Q13		4/1/2013	NE	37.30	NA	NA	NA	404.57		0.0	*
3Q13		7/3/2013	NE	34.48	NA	NA	NA	407.39		0.0	*
4Q13		10/1/2013	NE	35.70	NA	NA	NA	406.17		0.0	*
1Q14		2/12/2014	NE	37.54	NA	NA	NA	404.33		0.4	*
2Q14		4/1/2014	NE	38.43	NA	NA	NA	403.44		0.0	*
3Q14		7/1/2014	NE	38.00	NA	NA	NA	403.87		0.0	*
4Q14		10/3/2014	NE	37.73	NA	NA	NA	404.14		0.0	*
P-9L											
1Q12	444.41	1/3/2012	NE	34.82	NA	NA	NA	409.59	334.41 - 332.41 (110.00 - 112.00)	NA	*
2Q12		4/2/2012	NE	35.95	NA	NA	NA	408.46		0.0	*
3Q12		7/2/2012	NE	36.48	NA	NA	NA	407.93		0.0	*
4Q12		10/1/2012	NE	38.22	NA	NA	NA	406.19		0.0	*
1Q13		1/3/2013	NE	39.98	NA	NA	NA	404.43		0.0	*
2Q13		4/1/2013	NE	40.80	NA	NA	NA	403.61		0.0	*
3Q13		7/3/2013	NE	39.16	NA	NA	NA	405.25		4.9	*
4Q13		10/1/2013	NE	39.45	NA	NA	NA	404.96		0.0	*
1Q14		2/12/2014	NE	41.01	NA	NA	NA	403.40		0.2	*
2Q14		4/1/2014	NE	42.15	NA	NA	NA	402.26		0.0	*
3Q14		7/2/2014	NE	41.59	NA	NA	NA	402.82		0.0	*
4Q14		10/3/2014	NE	41.29	NA	NA	NA	403.12		0.0	*
P-9U											
1Q12	444.91	1/3/2012	NE	34.52	NA	NA	NA	410.39	344.32 - 342.32 (100.59 - 102.59)	NA	*
2Q12		4/2/2012	NE	36.34	NA	NA	NA	408.57		0.0	*
3Q12		7/2/2012	NE	36.81	NA	NA	NA	408.10		0.0	*
4Q12		10/1/2012	NE	38.59	NA	NA	NA	406.32		0.0	*
1Q13		1/3/2013	NE	40.11	NA	NA	NA	404.80		0.0	*
2Q13		4/1/2013	NE	41.20	NA	NA	NA	403.71		0.0	*
3Q13		7/3/2013	NE	39.74	NA	NA	NA	405.17		0.5	*
4Q13		10/1/2013	NE	39.93	NA	NA	NA	404.98		0.0	*
1Q14		2/12/2014	NE	41.36	NA	NA	NA	403.55		0.1	*
2Q14		4/1/2014	NE	42.28	NA	NA	NA	402.63		0.0	*
3Q14		7/2/2014	NE	42.07	NA	NA	NA	402.84		0.0	*
4Q14		10/3/2014	NE	41.81	NA	NA	NA	403.10		0.0	*
P-11L											
1Q12	442.80	1/3/2012	NE	31.77	NA	NA	NA	411.03	332.59 - 330.59 (110.21 - 112.21)	NA	*
2Q12		4/2/2012	NE	32.68	NA	NA	NA	410.12		0.0	*
3Q12		7/2/2012	NE	33.52	NA	NA	NA	409.28		0.0	*
4Q12		10/1/2012	NE	35.56	NA	NA	NA	407.24		0.0	*
1Q13		1/3/2013	NE	37.20	NA	NA	NA	405.60		0.0	*
2Q13		4/1/2013	NE	37.97	NA	NA	NA	404.83		0.0	*
3Q13		7/3/2013	NE	37.85	NA	NA	NA	404.95		0.0	*
4Q13		10/1/2013	NE	36.60	NA	NA	NA	406.20		1.0	*
1Q14		2/12/2014	NE	38.37	NA	NA	NA	404.43		8.9	*
2Q14		4/4/2014	NE	42.89	NA	NA	NA	399.91		7.1	*
3Q14		7/1/2014	NE	38.58	NA	NA	NA	404.22		0.0	*
4Q14		10/2/2014	NE	38.10	NA	NA	NA	404.70		0.0	*
P-11U											
1Q12	443.09	1/3/2012	NE	32.35	NA	NA	NA	410.74	343.17 - 341.17 (99.92 - 101.92)	NA	*
2Q12		4/2/2012	NE	33.34	NA	NA	NA	409.75		0.0	*
3Q12		7/2/2012	NE	34.15	NA	NA	NA	408.94		0.0	*
4Q12		10/1/2012	NE	36.19	NA	NA	NA	406.90		0.0	*
1Q13		1/3/2013	NE	37.80	NA	NA	NA	405.29		0.0	*
2Q13		4/1/2013	NE	38.62	NA	NA	NA	404.47		0.0	*
3Q13		7/3/2013	NE	36.40	NA	NA	NA	406.69		0.0	*
4Q13		10/1/2013	NE	37.20	NA	NA	NA	405.89		0.0	*
1Q14		2/12/2014	NE	38.98	NA	NA	NA	404.11		0.9	*
2Q14		4/4/2014	NE	39.74	NA	NA	NA	403.35		0.2	*
3Q14		7/1/2014	NE	39.18	NA	NA	NA	403.91		0.0	*
4Q14		10/2/2014	NE	38.74	NA	NA	NA	404.35		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-14											
1Q12	442.65	1/3/2012	NE	28.98	NA	NA	NA	413.67	395.32 - 385.32 (47.33 - 57.33)	NA	*
2Q12		4/2/2012	NE	29.42	NA	NA	NA	413.23		0.0	*
3Q12		7/2/2012	NE	30.55	NA	NA	NA	412.10		0.0	*
4Q12		10/1/2012	NE	32.39	NA	NA	NA	410.26		0.0	*
1Q13		1/3/2013	NE	34.01	NA	NA	NA	408.64		0.0	*
2Q13		4/1/2013	NE	33.74	NA	NA	NA	408.91		0.0	*
3Q13		7/3/2013	NE	30.67	NA	NA	NA	411.98		0.0	*
4Q13		10/1/2013	NE	33.18	NA	NA	NA	409.47		4.6	*
1Q14		2/12/2014	NE	35.26	NA	NA	NA	407.39		12.8	*
2Q14		4/2/2014	NE	35.67	NA	NA	NA	406.98		0.0	*
3Q14		7/3/2014	NE	34.40	NA	NA	NA	408.25		25.7	*
4Q14		10/1/2014	NE	34.05	NA	NA	NA	408.60		0.0	*
P-15											
1Q12	443.35	1/3/2012	31.06	31.06	412.29	412.30	0.01	412.30	397.90 - 387.90 (45.45 - 55.45)	NA	*
2Q12		4/2/2012	NE	31.55	NA	NA	NA	411.80		0.0	*
3Q12		7/2/2012	NE	32.40	NA	NA	NA	410.95		0.0	*
4Q12		10/1/2012	NE	34.35	NA	NA	NA	409.00		0.6	*
1Q13		1/3/2013	NE	35.81	NA	NA	NA	407.54		0.0	*
2Q13		4/1/2013	NE	36.46	NA	NA	NA	406.89		0.0	*
3Q13		7/3/2013	NE	33.48	NA	NA	NA	409.87		0.0	*
4Q13		10/1/2013	NE	35.03	NA	NA	NA	408.32		0.2	*
1Q14		2/12/2014	NE	37.08	NA	NA	NA	406.27		1.5	*
2Q14		4/4/2014	NE	39.02	NA	NA	NA	404.33		0.3	*
3Q14		7/3/2014	NE	37.04	NA	NA	NA	406.31		0.0	*
4Q14		10/1/2014	NE	36.57	NA	NA	NA	406.78		0.0	*
P-16											
1Q12	442.31	1/3/2012	NE	30.00	NA	NA	NA	412.31	396.57 - 386.57 (45.74 - 55.74)	NA	*
2Q12		4/1/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/6/2012	NE	31.16	NA	NA	NA	411.15		0.0	*
4Q12		10/4/2012	NE	33.35	NA	NA	NA	408.96		0.0	*
1Q13		1/3/2013	NE	34.80	NA	NA	NA	407.51		0.0	*
2Q13		4/1/2013	NE	35.55	NA	NA	NA	406.76		0.0	*
3Q13		7/3/2013	NE	32.10	NA	NA	NA	410.21		0.0	*
4Q13		10/1/2013	NE	33.96	NA	NA	NA	408.35		0.3	*
1Q14		2/12/2014	NE	36.08	NA	NA	NA	406.23		10.1	*
2Q14		4/3/2014	NE	37.82	NA	NA	NA	404.49		42.2	*
3Q14		7/3/2014	NE	36.15	NA	NA	NA	406.16		0.7	*
4Q14		10/1/2014	NE	35.77	NA	NA	NA	406.54		0.0	*
P-43											
1Q12	444.07	1/3/2012	NE	33.24	NA	NA	NA	410.83	380.51 - 370.51 (63.56 - 73.56)	NA	*
2Q12		4/2/2012	NE	34.17	NA	NA	NA	409.90		0.0	*
3Q12		7/2/2012	NE	34.95	NA	NA	NA	409.12		0.0	*
4Q12		10/1/2012	NE	36.80	NA	NA	NA	407.27		0.0	*
1Q13		1/3/2013	NE	38.21	NA	NA	NA	405.86		0.0	*
2Q13		4/1/2013	NE	39.10	NA	NA	NA	404.97		0.0	*
3Q13		7/3/2013	NE	37.04	NA	NA	NA	407.03		0.0	*
4Q13		10/1/2013	NE	37.73	NA	NA	NA	406.34		0.1	*
1Q14		2/12/2014	NE	39.52	NA	NA	NA	404.55		1.2	*
2Q14		4/4/2014	NE	41.35	NA	NA	NA	402.72		0.2	*
3Q14		7/1/2014	NE	39.73	NA	NA	NA	404.34		0.0	*
4Q14		10/2/2014	NE	39.31	NA	NA	NA	404.76		8.5	*
P-53											
1Q12	446.23	1/3/2012	NE	38.73	NA	NA	NA	407.50	407.73 - 382.73 (38.50 - 63.50)	0.0	
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		NM	
4Q12		10/1/2012	NE	41.88	NA	NA	NA	404.35		0.0	
1Q13		1/2/2013	NE	43.06	NA	NA	NA	403.17		0.0	
2Q13		4/1/2013	NE	44.29	NA	NA	NA	401.94		0.1	
3Q13		7/2/2013	NE	42.84	NA	NA	NA	403.39		0.4	
4Q13		10/2/2013	NE	42.20	NA	NA	NA	404.03		0.0	
1Q14		2/10/2014	NE	43.66	NA	NA	NA	402.57		0.0	
2Q14		4/1/2014	NE	44.32	NA	NA	NA	401.91		0.3	
3Q14		7/1/2014	NE	44.49	NA	NA	NA	401.74		0.0	
4Q14		10/2/2014	NE	43.81	NA	NA	NA	402.42		0.0	
P-54											
1Q12	442.18	1/3/2012	NE	37.17	NA	NA	NA	405.01	404.18 - 379.18 (38.00 - 63.00)	0.0	*
2Q12		4/2/2012	NE	38.48	NA	NA	NA	403.70		0.0	
3Q12		7/2/2012	NE	38.73	NA	NA	NA	403.45		0.0	
4Q12		10/1/2012	NE	40.44	NA	NA	NA	401.74		0.0	
1Q13		1/3/2013	NE	41.62	NA	NA	NA	400.56		0.0	
2Q13		4/1/2013	NE	42.26	NA	NA	NA	399.92		0.0	
3Q13		7/1/2013	NE	39.40	NA	NA	NA	402.78		0.8	
4Q13		10/1/2013	NE	39.74	NA	NA	NA	402.44		0.0	
1Q14		2/10/2014	NE	42.20	NA	NA	NA	399.98		0.2	
2Q14		4/3/2014	NE	42.59	NA	NA	NA	399.59		0.2	
3Q14		7/1/2014	NE	41.88	NA	NA	NA	400.30		0.0	
4Q14		10/1/2014	NE	40.82	NA	NA	NA	401.36		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-55											
1Q12	445.95	1/4/2012	NE	40.71	NA	NA	NA	405.24	406.13 - 381.13 (39.82 - 64.82)	0.0	
2Q12		4/2/2012	NE	42.04	NA	NA	NA	403.91		0.0	
3Q12		7/2/2012	NE	42.33	NA	NA	NA	403.62		0.0	
4Q12		10/1/2012	NE	44.17	NA	NA	NA	401.78		3.0	
1Q13		1/8/2013	NE	45.24	NA	NA	NA	400.71		0.0	
2Q13	443.78	4/2/2013	NE	43.87	NA	NA	NA	399.91	403.35 - 393.35 (40.43 - 50.43)	202.0	Replaced during 4Q12
3Q13		7/5/2013	NE	41.43	NA	NA	NA	402.35		136.4	
4Q13		10/2/2013	NE	41.58	NA	NA	NA	402.20		52.4	
1Q14		2/13/2014	43.24	43.37	400.41	400.54	0.13	400.51		93.3	
2Q14		4/4/2014	44.32	44.37	399.41	399.46	0.05	399.45		29.1	
3Q14		7/1/2014	43.63	43.76	400.02	400.15	0.13	400.12		192.0	
4Q14		10/3/2014	42.81	43.02	400.76	400.97	0.21	400.93		53.8	
P-56											
1Q12	446.02	1/4/2012	NE	41.51	NA	NA	NA	404.51	405.20 - 380.20 (40.82 - 65.82)	1.1	
2Q12		4/3/2012	NE	42.88	NA	NA	NA	403.14		0.0	
3Q12		7/5/2012	NE	43.01	NA	NA	NA	403.01		0.0	
4Q12		10/2/2012	NE	44.76	NA	NA	NA	401.26		0.0	
1Q13		1/4/2013	NE	45.65	NA	NA	NA	400.37		0.6	
2Q13		4/2/2013	NE	46.40	NA	NA	NA	399.62		0.0	
3Q13		7/5/2013	NE	43.60	NA	NA	NA	402.42		0.0	
4Q13		10/2/2013	NE	44.29	NA	NA	NA	401.73		0.1	
1Q14		2/13/2014	NE	46.35	NA	NA	NA	399.67		0.0	
2Q14		4/4/2014	NE	47.32	NA	NA	NA	398.70		0.3	
3Q14		7/1/2014	NE	46.14	NA	NA	NA	399.88		0.0	
4Q14		10/3/2014	NE	45.20	NA	NA	NA	400.82		0.0	
P-57											
1Q12	446.53	2/13/2012	NE	42.13	NA	NA	NA	404.40	406.07 - 381.07 (40.46 - 65.46)	NA	
2Q12		4/4/2012	NE	42.61	NA	NA	NA	403.92		0.0	
3Q12		7/5/2012	NE	43.00	NA	NA	NA	403.53		0.0	
4Q12		10/1/2012	NE	44.78	NA	NA	NA	401.75		0.0	
1Q13		1/4/2013	NE	45.82	NA	NA	NA	400.71		0.0	
2Q13		4/2/2013	NE	46.63	NA	NA	NA	399.90		0.0	
3Q13		7/5/2013	NE	43.70	NA	NA	NA	402.83		0.0	
4Q13		10/2/2013	NE	44.12	NA	NA	NA	402.41		1.8	
1Q14		2/12/2014	NE	46.57	NA	NA	NA	399.96		2.0	
2Q14		4/7/2014	NE	47.27	NA	NA	NA	399.26		4.1	
3Q14		7/1/2014	NE	46.12	NA	NA	NA	400.41		0.0	
4Q14		10/3/2014	NE	45.25	NA	NA	NA	401.28		0.0	
P-58											
1Q12	444.92	1/4/2012	NE	39.41	NA	NA	NA	405.51	404.70 - 379.70 (40.21 - 65.21)	13.5	*
2Q12		4/3/2012	NE	40.81	NA	NA	NA	404.11		0.5	
3Q12		7/5/2012	NE	41.04	NA	NA	NA	403.88		0.0	
4Q12		10/2/2012	NE	42.90	NA	NA	NA	402.02		0.2	
1Q13		1/4/2013	NE	43.80	NA	NA	NA	401.12		0.0	
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.17		0.0	
3Q13		7/5/2013	NE	41.85	NA	NA	NA	403.07		0.0	
4Q13		10/2/2013	NE	41.97	NA	NA	NA	402.95		4.9	
1Q14		2/12/2014	NE	44.66	NA	NA	NA	400.26		3.6	
2Q14		4/4/2014	NE	45.39	NA	NA	NA	399.53		0.3	
3Q14		7/2/2014	NE	44.25	NA	NA	NA	400.67		0.0	
4Q14		10/3/2014	NE	43.13	NA	NA	NA	401.79		0.0	
P-59											
1Q12	446.78	1/4/2012	NE	42.61	NA	NA	NA	404.17	398.87 - 373.87 (47.91 - 72.91)	250.0	*
2Q12		4/4/2012	NE	43.82	NA	NA	NA	402.96		0.0	*
3Q12		7/5/2012	NE	44.00	NA	NA	NA	402.78		0.0	*
4Q12		10/2/2012	NE	45.83	NA	NA	NA	400.95		389.0	*
1Q13		1/4/2013	NE	46.54	NA	NA	NA	400.24		417.0	*
2Q13		4/2/2013	NE	47.20	NA	NA	NA	399.58		116.0	*
3Q13		7/5/2013	NE	44.47	NA	NA	NA	402.31		186.4	*
4Q13		10/2/2013	NE	45.37	NA	NA	NA	401.41		131.4	*
1Q14		2/13/2014	NE	47.35	NA	NA	NA	399.43		111.4	*
2Q14		4/4/2014	NE	49.04	NA	NA	NA	397.74		0.3	
3Q14		7/1/2014	NE	47.17	NA	NA	NA	399.61		292.1	*
4Q14		10/3/2014	NE	46.39	NA	NA	NA	400.39		397.3	*
P-60											
1Q12	446.57	1/4/2012	NE	41.98	NA	NA	NA	404.59	403.12 - 383.12 (43.45 - 63.45)	5.5	*
2Q12		4/3/2012	43.46	43.48	403.09	403.11	0.02	403.11		10.0	
3Q12		7/5/2012	43.51	43.55	403.02	403.06	0.04	403.05		19.8	
4Q12		10/2/2012	45.33	45.44	401.13	401.24	0.11	401.22		44.0	
1Q13		1/4/2013	NE	46.19	NA	NA	NA	400.38		9.9	
2Q13		4/2/2013	46.96	47.04	399.53	399.61	0.08	399.60		8.8	
3Q13		7/5/2013	44.41	44.46	402.11	402.16	0.05	402.15		42.7	
4Q13		10/2/2013	44.91	44.99	401.58	401.66	0.08	401.65		28.3	
1Q14		2/13/2014	46.68	46.79	399.78	399.89	0.11	399.87		2.4	
2Q14		4/4/2014	47.74	47.77	398.80	398.83	0.03	398.83		25.1	
3Q14		7/1/2014	46.85	46.93	399.64	399.72	0.08	399.71		309.3	
4Q14		10/3/2014	46.09	46.17	400.40	400.48	0.08	400.47		127.9	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-60-11											
1Q12	446.18	1/4/2012	NE	41.22	NA	NA	NA	404.96	413.03 - 383.03 (33.15 - 63.15)	0.3	
2Q12		4/3/2012	NE	42.65	NA	NA	NA	403.53		0.0	
3Q12		7/5/2012	NE	42.64	NA	NA	NA	403.54		0.0	
4Q12		10/2/2012	44.32	44.41	401.77	401.86	0.09	401.84		0.1	
1Q13		1/4/2013	NE	45.06	NA	NA	NA	401.12		2.0	
2Q13		4/2/2013	NE	45.72	NA	NA	NA	400.46		0.0	
3Q13		7/5/2013	NE	43.81	NA	NA	NA	402.37		0.0	
4Q13		10/2/2013	NE	43.43	NA	NA	NA	402.75		0.0	
1Q14		2/13/2014	NE	44.99	NA	NA	NA	401.19		0.0	
2Q14		4/4/2014	NE	45.58	NA	NA	NA	400.60		0.2	
3Q14		7/1/2014	NE	45.74	NA	NA	NA	400.44		1.3	
4Q14		10/3/2014	NE	44.62	NA	NA	NA	401.56		0.0	
P-60-12											
1Q12	443.31	1/4/2012	NE	38.76	NA	NA	NA	404.55	383.31 - 373.31 (60.00 - 70.00)	1.5	*
2Q12		4/3/2012	NE	40.25	NA	NA	NA	403.06		0.0	*
3Q12		7/5/2012	NE	40.23	NA	NA	NA	403.08		0.0	*
4Q12		10/2/2012	NE	44.15	NA	NA	NA	399.16		0.0	*
1Q13		1/4/2013	NE	42.97	NA	NA	NA	400.34		2.4	*
2Q13		4/2/2013	NE	43.77	NA	NA	NA	399.54		0.0	*
3Q13		7/5/2013	NE	41.20	NA	NA	NA	402.11		0.0	*
4Q13		10/2/2013	NE	41.72	NA	NA	NA	401.59		1.1	*
1Q14		2/13/2014	NE	43.45	NA	NA	NA	399.86		72.6	*
2Q14		4/4/2014	NE	44.54	NA	NA	NA	398.77		43.5	*
3Q14		7/1/2014	NE	43.66	NA	NA	NA	399.65		46.2	*
4Q14		10/3/2014	NE	42.93	NA	NA	NA	400.38		0.6	*
P-60-12S											
1Q12	443.33	1/4/2012	NE	22.81	NA	NA	NA	420.52	429.49 - 419.49 (13.84 - 23.84)	1.0	
2Q12		4/3/2012	NE	20.21	NA	NA	NA	423.12		0.0	
3Q12		7/5/2012	NE	19.48	NA	NA	NA	423.85		0.0	
4Q12		10/2/2012	NE	19.04	NA	NA	NA	424.29		0.0	
1Q13		1/4/2013	NE	19.35	NA	NA	NA	423.98		3.5	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	17.73	NA	NA	NA	425.60		0.0	
4Q13		10/2/2013	NE	19.03	NA	NA	NA	424.30		0.3	
1Q14		2/13/2014	NE	19.02	NA	NA	NA	424.31		0.0	
2Q14		4/4/2014	NE	19.03	NA	NA	NA	424.30		0.5	
3Q14		7/1/2014	NE	18.00	NA	NA	NA	425.33		1.6	
4Q14		10/3/2014	NE	18.95	NA	NA	NA	424.38		0.3	
P-60-13											
1Q12	442.43	1/4/2012	NE	37.82	NA	NA	NA	404.61	402.43 - 382.43 (40.00 - 60.00)	4.3	*
2Q12		4/3/2012	NE	39.21	NA	NA	NA	403.22		0.0	*
3Q12		7/5/2012	NE	39.37	NA	NA	NA	403.06		0.0	*
4Q12		10/2/2012	NE	40.61	NA	NA	NA	401.82		0.0	
1Q13		1/4/2013	NE	41.55	NA	NA	NA	400.88		0.7	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	40.53	NA	NA	NA	401.90		0.0	
4Q13		10/2/2013	NE	39.98	NA	NA	NA	402.45		0.6	*
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	42.81	NA	NA	NA	399.62		0.7	
3Q14		7/1/2014	NE	42.31	NA	NA	NA	400.12		0.0	
4Q14		10/3/2014	NE	40.78	NA	NA	NA	401.65		15.0	
P-60-13S											
1Q12	442.39	1/4/2012	NE	17.66	NA	NA	NA	424.73	432.39 - 422.39 (10.00 - 20.00)	1.5	
2Q12		4/3/2012	NE	17.58	NA	NA	NA	424.81		0.0	
3Q12		7/5/2012	NE	17.87	NA	NA	NA	424.52		0.0	
4Q12		10/2/2012	NE	17.97	NA	NA	NA	424.42		0.7	
1Q13		1/4/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/2/2013	NM	NM	NA	NA	NA	NA		NM	
3Q13		7/5/2013	NE	15.66	NA	NA	NA	426.73		8.2	
4Q13		10/2/2013	NE	17.60	NA	NA	NA	424.79		2.8	
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	17.16	NA	NA	NA	425.23		0.3	
3Q14		7/1/2014	NE	17.16	NA	NA	NA	425.23		0.0	
4Q14		10/3/2014	NE	17.44	NA	NA	NA	424.95		0.0	
P-60-S											
1Q12	446.98	1/4/2012	41.39	41.90	405.08	405.59	0.51	405.49	410.50 - 395.50 (36.48 - 51.48)	1.8	
2Q12		4/3/2012	42.85	43.28	403.70	404.13	0.43	404.04		1.2	
3Q12		7/5/2012	43.12	43.26	403.72	403.86	0.14	403.83		0.7	
4Q12		10/4/2012	43.94	45.84	401.14	403.04	1.90	402.66		0.3	
1Q13		1/4/2013	45.34	45.95	401.03	401.64	0.61	401.52		0.0	
2Q13		4/2/2013	46.33	46.39	400.59	400.65	0.06	400.64		0.1	
3Q13		7/5/2013	NE	44.45	NA	NA	NA	402.53		0.0	
4Q13		10/2/2013	43.56	44.49	402.49	403.42	0.93	403.23		0.2	
1Q14		2/13/2014	45.48	45.86	401.12	401.50	0.38	401.42		0.3	
2Q14		4/4/2014	46.38	46.57	400.41	400.60	0.19	400.56		0.2	
3Q14		7/1/2014	46.35	46.37	400.61	400.63	0.02	400.63		0.1	
4Q14		10/3/2014	NE	45.38	NA	NA	NA	401.60		0.9	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-61											
1Q12	444.27	1/3/2012	NE	40.34	NA	NA	NA	403.93	398.59 - 373.59 (45.68 - 70.68)	NA	*
2Q12		4/3/2012	NE	41.50	NA	NA	NA	402.77		0.0	*
3Q12		7/3/2012	NE	41.53	NA	NA	NA	402.74		0.0	*
4Q12		10/2/2012	NE	43.36	NA	NA	NA	400.91		24.3	*
1Q13		1/4/2013	43.82	45.95	398.32	400.45	2.13	400.02		38.8	*
2Q13		4/2/2013	44.78	46.64	397.63	399.49	1.86	399.12		23.1	*
3Q13		7/5/2013	42.52	42.56	401.71	401.75	0.04	401.74		186.4	*
4Q13		10/2/2013	43.08	43.14	401.13	401.19	0.06	401.18		10.9	*
1Q14		2/12/2014	44.62	46.17	398.10	399.65	1.55	399.34		410.7	*
2Q14		4/4/2014	45.80	45.81	398.46	398.47	0.01	398.47		13.0	
3Q14		7/2/2014	44.75	45.49	398.78	399.52	0.74	399.37		150.6	*
4Q14		10/2/2014	43.47	44.23	400.04	400.80	0.76	400.64		269.9	*
P-62											
1Q12	442.32	1/3/2012	37.68	37.71	404.61	404.64	0.03	404.64	400.85 - 375.85 (41.47 - 66.47)	NA	*
2Q12		4/3/2012	NE	30.94	NA	NA	NA	411.38		0.0	*
3Q12		7/3/2012	39.13	39.15	403.17	403.19	0.02	403.19		0.0	*
4Q12		10/1/2012	40.61	42.35	399.97	401.71	1.74	401.37		3.2	*
1Q13		1/8/2013	NE	30.39	NA	NA	NA	411.93		0.0	*
2Q13		4/2/2013	42.81	44.32	398.00	399.51	1.51	399.21		0.0	
3Q13		7/1/2013	40.77	41.88	400.44	401.55	1.11	401.33		32.6	*
4Q13		10/2/2013	40.61	42.26	400.06	401.71	1.65	401.38		62.6	*
1Q14		2/12/2014	42.35	43.85	398.47	399.97	1.50	399.67		198.1	
2Q14		4/4/2014	43.51	45.28	397.04	398.81	1.77	398.46		0.8	
3Q14		7/2/2014	42.58	43.69	398.63	399.74	1.11	399.52		0.0	
4Q14		10/3/2014	41.64	42.89	399.43	400.68	1.25	400.43		0.9	
P-63											
1Q12	445.75	1/3/2012	NE	40.65	NA	NA	NA	405.10	398.46 - 373.46 (47.29 - 72.29)	NA	*
2Q12		4/3/2012	NE	42.09	NA	NA	NA	403.66		0.0	*
3Q12		7/3/2012	NE	42.94	NA	NA	NA	402.81		0.0	*
4Q12		10/1/2012	NE	44.55	NA	NA	NA	401.20		104.0	*
1Q13		1/4/2013	NE	46.03	NA	NA	NA	399.72		0.0	*
2Q13		4/1/2013	NE	46.98	NA	NA	NA	398.77		0.0	*
3Q13		7/5/2013	NE	45.41	NA	NA	NA	400.34		142.0	*
4Q13		10/2/2013	44.98	45.01	400.74	400.77	0.03	400.76		33.4	*
1Q14		2/12/2014	NE	45.06	NA	NA	NA	400.69		22.9	*
2Q14		4/4/2014	47.98	48.14	397.61	397.77	0.16	397.74		0.3	
3Q14		7/2/2014	46.80	46.82	398.93	398.95	0.02	398.95		47.5	*
4Q14		10/2/2014	45.90	45.94	399.81	399.85	0.04	399.84		70.3	*
P-64											
1Q12	446.52	1/3/2012	41.68	41.75	404.77	404.84	0.07	404.83	399.29 - 374.29 (47.23 - 72.23)	NA	*
2Q12		4/3/2012	43.18	43.19	403.33	403.34	0.01	403.34		0.0	*
3Q12		7/3/2012	44.40	44.41	402.11	402.12	0.01	402.12		0.0	*
4Q12		10/1/2012	45.62	45.68	400.84	400.90	0.06	400.89		34.5	*
1Q13		1/4/2013	NE	47.84	NA	NA	NA	398.68		103.0	
2Q13		4/1/2013	NE	48.23	NA	NA	NA	398.29		0.0	
3Q13		7/5/2013	46.95	46.97	399.55	399.57	0.02	399.57		96.5	*
4Q13		10/2/2013	46.25	46.31	400.21	400.27	0.06	400.26		41.4	*
1Q14		2/12/2014	47.93	47.94	398.58	398.59	0.01	398.59		114.2	
2Q14		4/4/2014	49.60	49.68	396.84	396.92	0.08	396.90		6.8	
3Q14		7/2/2014	48.08	48.36	398.16	398.44	0.28	398.38		0.0	
4Q14		10/2/2014	47.30	47.62	398.90	399.22	0.32	399.16		336.2	
P-65											
1Q12	444.53	1/3/2012	NE	39.15	NA	NA	NA	405.38	396.91 - 371.91 (47.62 - 72.62)	NA	*
2Q12		4/3/2012	NE	40.76	NA	NA	NA	403.77		0.0	*
3Q12		7/3/2012	NE	41.76	NA	NA	NA	402.77		0.0	*
4Q12		10/1/2012	NE	43.00	NA	NA	NA	401.53		0.5	*
1Q13		1/4/2013	NE	44.61	NA	NA	NA	399.92		0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NM	Well damaged
4Q13	444.60	10/2/2013	NE	43.11	NA	NA	NA	401.49	397.58 - 372.58 (47.02 - 72.02)	21.2	*Well repaired during 3Q13; Well surveyed during 4Q13
1Q14		2/12/2014	NE	44.91	NA	NA	NA	399.69		2.3	*
2Q14		4/4/2014	NE	46.68	NA	NA	NA	397.92		0.6	*
3Q14		7/2/2014	NE	45.37	NA	NA	NA	399.23		0.0	*
4Q14		10/2/2014	NE	44.44	NA	NA	NA	400.16		16.5	*
P-66											
1Q12	436.70	1/1/2012	NM	NM	NA	NA	NA	NA	401.98 - 376.98 (34.72 - 59.72)	NM	
2Q12		4/1/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/5/2012	32.60	32.61	404.09	404.10	0.01	404.10		3.3	*
4Q12		10/2/2012	NE	34.55	NA	NA	NA	402.15		5.0	*
1Q13		1/2/2013	NE	35.40	NA	NA	NA	401.30		66.2	
2Q13		4/2/2013	NE	36.41	NA	NA	NA	400.29		0.6	
3Q13		7/2/2013	NE	33.55	NA	NA	NA	403.15		3.5	*
4Q13		10/2/2013	NE	33.44	NA	NA	NA	403.26		54.0	*
1Q14		2/11/2014	NE	36.39	NA	NA	NA	400.31		13.1	
2Q14		4/4/2014	NE	36.99	NA	NA	NA	399.71		0.2	
3Q14		7/2/2014	NE	35.80	NA	NA	NA	400.90		0.9	
4Q14		10/3/2014	NE	34.77	NA	NA	NA	401.93		0.4	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-67											
1Q12	444.13	1/4/2012	NE	37.08	NA	NA	NA	407.05	402.16 - 377.16 (41.98 - 66.98)	0.0	*
2Q12		4/3/2012	NE	38.50	NA	NA	NA	405.63		0.0	*
3Q12		7/2/2012	NE	38.90	NA	NA	NA	405.23		0.0	*
4Q12		10/2/2012	NE	40.81	NA	NA	NA	403.32		0.0	*
1Q13		1/2/2013	NE	41.69	NA	NA	NA	402.44		11.1	*
2Q13		4/2/2013	42.79	42.80	401.33	401.34	0.01	401.34		46.5	
3Q13		7/2/2013	NE	40.29	NA	NA	NA	403.84		0.0	*
4Q13		10/2/2013	39.78	39.80	404.33	404.35	0.02	404.35		17.3	*
1Q14		2/11/2014	42.60	42.63	401.50	401.53	0.03	401.52		60.9	
2Q14		4/4/2014	NE	43.35	NA	NA	NA	400.78		1.2	
3Q14		7/3/2014	NE	42.39	NA	NA	NA	401.74		1.8	
4Q14		10/3/2014	NE	41.37	NA	NA	NA	402.76		45.9	*
P-68											
1Q12	445.07	1/4/2012	40.53	40.61	404.46	404.54	0.08	404.52	399.81 - 374.81 (45.26 - 70.26)	225.0	*
2Q12		4/3/2012	NE	42.08	NA	NA	NA	402.99		0.0	*
3Q12		7/5/2012	42.08	42.12	402.95	402.99	0.04	402.98		288.0	*
4Q12		10/2/2012	43.85	44.04	401.03	401.22	0.19	401.18		349.0	*
1Q13		1/4/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/2/2013	45.40	45.54	399.53	399.67	0.14	399.64		74.3	
3Q13		7/5/2013	43.05	43.12	401.95	402.02	0.07	402.01		197.0	*
4Q13		10/2/2013	43.42	43.52	401.55	401.65	0.10	401.63		101.6	*
1Q14		2/13/2014	45.18	45.29	399.78	399.89	0.11	399.87		172.6	*
2Q14		4/7/2014	45.94	46.28	398.79	399.13	0.34	399.06		9.3	
3Q14		7/2/2014	45.27	45.32	399.75	399.80	0.05	399.79		215.5	
4Q14		10/3/2014	44.56	44.67	400.40	400.51	0.11	400.49		254.8	*
P-69											
1Q12	443.18	1/4/2012	NE	39.18	NA	NA	NA	404.00	402.36 - 377.36 (40.82 - 65.82)	18.0	*
2Q12		4/3/2012	NE	40.59	NA	NA	NA	402.59		0.0	*
3Q12		7/5/2012	NE	40.61	NA	NA	NA	402.57		0.0	*
4Q12		10/2/2012	NE	42.46	NA	NA	NA	400.72		0.8	
1Q13		1/4/2013	NE	43.85	NA	NA	NA	399.33		0.0	
2Q13		4/2/2013	NE	43.94	NA	NA	NA	399.24		0.0	
3Q13		7/5/2013	NE	41.36	NA	NA	NA	401.82		0.0	
4Q13		10/2/2013	NE	42.17	NA	NA	NA	401.01		0.5	
1Q14		2/13/2014	NE	43.85	NA	NA	NA	399.33		79.9	
2Q14		4/7/2014	NE	44.88	NA	NA	NA	398.30		0.2	
3Q14		7/2/2014	NE	44.00	NA	NA	NA	399.18		0.0	
4Q14		10/2/2014	NE	43.01	NA	NA	NA	400.17		0.0	
P-70											
1Q12	442.83	1/3/2012	NE	38.62	NA	NA	NA	404.21	398.16 - 373.16 (44.67 - 69.67)	NA	*
2Q12		4/3/2012	NE	39.80	NA	NA	NA	403.03		0.0	*
3Q12		7/3/2012	NE	39.83	NA	NA	NA	403.00		0.0	*
4Q12		10/1/2012	NE	41.67	NA	NA	NA	401.16		0.0	*
1Q13		1/4/2013	NE	42.72	NA	NA	NA	400.11		1.7	*
2Q13		4/2/2013	NE	43.59	NA	NA	NA	399.24		211.0	*
3Q13		7/5/2013	NE	41.06	NA	NA	NA	401.77		134.2	*
4Q13		10/2/2013	NE	41.52	NA	NA	NA	401.31		99.1	*
1Q14		2/12/2014	NE	43.28	NA	NA	NA	399.55		85.0	*
2Q14		4/4/2014	44.21	45.35	397.48	398.62	1.14	398.39		200.7	*
3Q14		7/2/2014	43.22	43.88	398.95	399.61	0.66	399.48		319.6	*
4Q14		10/2/2014	42.08	42.72	400.11	400.75	0.64	400.62		299.6	*
P-71											
1Q12	444.83	1/3/2012	NE	38.91	NA	NA	NA	405.92	402.22 - 377.22 (42.61 - 67.61)	NA	*
2Q12		4/3/2012	NE	40.34	NA	NA	NA	404.49		0.0	*
3Q12		7/3/2012	NE	40.90	NA	NA	NA	403.93		0.0	*
4Q12		10/2/2012	42.69	42.75	402.08	402.14	0.06	402.13		23.0	
1Q13		1/4/2013	NE	43.83	NA	NA	NA	401.00		1.1	
2Q13		4/2/2013	NE	44.54	NA	NA	NA	400.29		1.2	
3Q13		7/5/2013	NE	42.65	NA	NA	NA	402.18		82.5	
4Q13		10/2/2013	NE	42.53	NA	NA	NA	402.30		53.0	*
1Q14		2/13/2014	NE	44.35	NA	NA	NA	400.48		0.0	
2Q14		4/4/2014	NE	45.48	NA	NA	NA	399.35		0.8	
3Q14		7/3/2014	NE	44.61	NA	NA	NA	400.22		3.9	
4Q14		10/2/2014	NE	43.43	NA	NA	NA	401.40		185.5	
P-72											
1Q12	444.43	1/3/2012	NE	38.43	NA	NA	NA	406.00	398.66 - 373.60 (45.77 - 70.77)	NA	*
2Q12		4/3/2012	NE	39.58	NA	NA	NA	404.85		0.0	*
3Q12		7/3/2012	NE	40.30	NA	NA	NA	404.13		0.0	*
4Q12		10/1/2012	NE	41.88	NA	NA	NA	402.55		5.1	*
1Q13		1/4/2013	NE	43.27	NA	NA	NA	401.16		2.2	*
2Q13		4/1/2013	NE	44.23	NA	NA	NA	400.20		0.3	*
3Q13		7/5/2013	NE	42.36	NA	NA	NA	402.07		2.0	*
4Q13		10/2/2013	NE	41.88	NA	NA	NA	402.55		2.7	*
1Q14		2/12/2014	NE	43.86	NA	NA	NA	400.57		37.2	*
2Q14		4/4/2014	NE	45.12	NA	NA	NA	399.31		2.2	*
3Q14		7/2/2014	NE	44.19	NA	NA	NA	400.24		6.5	*
4Q14		10/2/2014	NE	43.02	NA	NA	NA	401.41		16.2	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-73											
1Q12	443.76	1/4/2012	NE	38.68	NA	NA	NA	405.08	402.17 - 377.17 (41.60 - 66.60)	3.3	*
2Q12		4/3/2012	NE	40.03	NA	NA	NA	403.73		0.4	*
3Q12		7/5/2012	NE	40.28	NA	NA	NA	403.48		0.3	*
4Q12		10/2/2012	NE	42.02	NA	NA	NA	401.74		7.5	
1Q13		1/4/2013	NE	43.04	NA	NA	NA	400.72		0.0	
2Q13		4/1/2013	NE	43.93	NA	NA	NA	399.83		0.0	
3Q13		7/5/2013	NE	41.48	NA	NA	NA	402.28		18.3	*
4Q13		10/2/2013	NE	41.68	NA	NA	NA	402.08		50.3	
1Q14		2/12/2014	NE	43.98	NA	NA	NA	399.78		70.1	
2Q14		4/7/2014	NE	44.82	NA	NA	NA	398.94		0.4	
3Q14		7/2/2014	NE	43.54	NA	NA	NA	400.22		0.0	
4Q14		10/3/2014	NE	42.69	NA	NA	NA	401.07		0.7	
P-74											
1Q12	442.63	1/4/2012	NE	38.56	NA	NA	NA	404.07	398.20 - 373.20 (44.43 - 69.43)	0.0	*
2Q12		4/3/2012	NE	39.94	NA	NA	NA	402.69		0.0	*
3Q12		7/5/2012	NE	42.14	NA	NA	NA	400.49		0.0	*
4Q12		10/2/2012	NE	41.78	NA	NA	NA	400.85		0.0	*
1Q13		1/4/2013	NE	42.55	NA	NA	NA	400.08		0.2	*
2Q13		4/2/2013	NE	43.23	NA	NA	NA	399.40		0.0	*
3Q13		7/5/2013	NE	40.55	NA	NA	NA	402.08		0.0	*
4Q13		10/2/2013	NE	41.49	NA	NA	NA	401.14		0.5	*
1Q14		1/14/2014	NE	43.18	NA	NA	NA	399.45		2.8	*
2Q14		4/7/2014	NE	43.86	NA	NA	NA	398.77		7.5	*
3Q14		7/2/2014	NE	43.25	NA	NA	NA	399.38		0.1	*
4Q14		10/2/2014	NE	42.21	NA	NA	NA	400.42		0.0	*
P-75											
1Q12	446.32	1/4/2012	NE	40.48	NA	NA	NA	405.84	403.19 - 378.19 (43.13 - 68.13)	0.0	*
2Q12		4/4/2012	NE	41.62	NA	NA	NA	404.70		0.0	*
3Q12		7/2/2012	42.14	42.14	404.18	404.18	0.00	404.18		0.0	*
4Q12		10/2/2012	44.10	44.20	402.12	402.22	0.10	402.20		1.9	
1Q13		1/2/2013	NE	44.87	NA	NA	NA	401.45		3.1	
2Q13		4/2/2013	NE	46.03	NA	NA	NA	400.29		0.7	
3Q13		7/2/2013	NE	43.43	NA	NA	NA	402.89		0.0	
4Q13		10/2/2013	NE	42.92	NA	NA	NA	403.40		3.7	*
1Q14		2/11/2014	NE	46.05	NA	NA	NA	400.27		4.1	
2Q14		4/4/2014	NE	46.69	NA	NA	NA	399.63		0.3	
3Q14		7/3/2014	NE	45.59	NA	NA	NA	400.73		0.0	
4Q14		10/3/2014	NE	44.52	NA	NA	NA	401.80		0.1	
P-82A											
1Q12	434.69	1/3/2012	NE	25.50	NA	NA	NA	409.19	401.48 - 386.48 (33.21 - 48.21)	0.0	*
2Q12		4/2/2012	NE	26.82	NA	NA	NA	407.87		0.0	*
3Q12		7/2/2012	NE	27.34	NA	NA	NA	407.35		0.0	*
4Q12		10/2/2012	NE	29.07	NA	NA	NA	405.62		0.0	*
1Q13		1/3/2013	NE	30.09	NA	NA	NA	404.60		0.0	*
2Q13		4/2/2013	NE	30.77	NA	NA	NA	403.92		0.2	*
3Q13		7/2/2013	NE	27.75	NA	NA	NA	406.94		0.0	*
4Q13		10/2/2013	NE	28.20	NA	NA	NA	406.49		0.0	*
1Q14		2/10/2014	NE	30.47	NA	NA	NA	404.22		8.9	*
2Q14		4/4/2014	NE	32.21	NA	NA	NA	402.48		0.0	*
3Q14		7/2/2014	NE	30.08	NA	NA	NA	404.61		0.6	*
4Q14		10/2/2014	NE	29.25	NA	NA	NA	405.44		0.0	*
P-82B											
1Q12	434.44	1/3/2012	NE	25.21	NA	NA	NA	409.23	370.84 - 368.84 (63.60 - 65.60)	0.0	*
2Q12		4/2/2012	NE	26.55	NA	NA	NA	407.89		0.0	*
3Q12		7/2/2012	NE	27.07	NA	NA	NA	407.37		0.0	*
4Q12		10/2/2012	NE	28.81	NA	NA	NA	405.63		0.0	*
1Q13		1/3/2013	NE	29.82	NA	NA	NA	404.62		0.0	*
2Q13		4/2/2013	NE	30.50	NA	NA	NA	403.94		0.4	*
3Q13		7/2/2013	NE	27.49	NA	NA	NA	406.95		0.0	*
4Q13		10/2/2013	NE	27.94	NA	NA	NA	406.50		0.0	*
1Q14		2/10/2014	NE	30.20	NA	NA	NA	404.24		0.3	*
2Q14		4/4/2014	NE	32.93	NA	NA	NA	401.51		0.0	*
3Q14		7/2/2014	NE	29.79	NA	NA	NA	404.65		0.7	*
4Q14		10/2/2014	NE	28.94	NA	NA	NA	405.50		0.0	*
P-82C											
1Q12	434.16	1/3/2012	NE	25.26	NA	NA	NA	408.90	351.39 - 349.39 (82.77 - 84.77)	0.0	*
2Q12		4/2/2012	NE	26.61	NA	NA	NA	407.55		0.0	*
3Q12		7/2/2012	NE	27.11	NA	NA	NA	407.05		0.0	*
4Q12		10/2/2012	NE	28.85	NA	NA	NA	405.31		0.0	*
1Q13		1/3/2013	NE	29.86	NA	NA	NA	404.30		0.0	*
2Q13		4/2/2013	NE	30.54	NA	NA	NA	403.62		0.8	*
3Q13		7/2/2013	NE	27.51	NA	NA	NA	406.65		0.0	*
4Q13		10/2/2013	NE	27.95	NA	NA	NA	406.21		0.0	*
1Q14		2/10/2014	NE	30.23	NA	NA	NA	403.93		0.2	*
2Q14		4/4/2014	NE	28.42	NA	NA	NA	405.74		0.1	*
3Q14		7/2/2014	NE	29.65	NA	NA	NA	404.51		0.7	*
4Q14		10/2/2014	NE	29.09	NA	NA	NA	405.07		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-82D											
1Q12	434.85	1/3/2012	NE	26.06	NA	NA	NA	408.79	323.43 - 321.43 (111.42 - 113.42)	0.0	*
2Q12		4/2/2012	NE	27.37	NA	NA	NA	407.48		0.0	*
3Q12		7/2/2012	NE	27.91	NA	NA	NA	406.94		0.0	*
4Q12		10/2/2012	NE	29.62	NA	NA	NA	405.23		0.0	*
1Q13		1/3/2013	NE	30.65	NA	NA	NA	404.20		0.0	*
2Q13		4/2/2013	NE	31.31	NA	NA	NA	403.54		0.2	*
3Q13		7/2/2013	NE	28.24	NA	NA	NA	406.61		0.0	*
4Q13		10/2/2013	NE	28.74	NA	NA	NA	406.11		0.0	*
1Q14		2/10/2014	NE	31.00	NA	NA	NA	403.85		14.5	*
2Q14		4/4/2014	NE	35.40	NA	NA	NA	399.45		0.2	*
3Q14		7/2/2014	NE	30.61	NA	NA	NA	404.24		0.4	*
4Q14		10/2/2014	NE	29.74	NA	NA	NA	405.11		0.0	*
P-83A											
1Q12	445.23	1/3/2012	NE	38.31	NA	NA	NA	406.92	398.58 - 383.58 (46.65 - 61.65)	NA	*
2Q12		4/2/2012	NE	39.85	NA	NA	NA	405.38		0.0	*
3Q12		7/2/2012	NE	40.50	NA	NA	NA	404.73		0.0	*
4Q12		10/1/2012	NE	42.29	NA	NA	NA	402.94		0.0	*
1Q13		1/3/2013	NE	43.85	NA	NA	NA	401.38		0.0	*
2Q13		4/2/2013	NE	44.75	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.44	NA	NA	NA	401.79		0.0	*
4Q13		10/1/2013	NE	43.55	NA	NA	NA	401.68		0.2	*
1Q14		2/11/2014	NE	44.72	NA	NA	NA	400.51		0.6	*
2Q14		4/1/2014	NE	45.74	NA	NA	NA	399.49		0.0	*
3Q14		7/1/2014	NE	45.12	NA	NA	NA	400.11		0.0	*
4Q14		10/1/2014	NE	44.60	NA	NA	NA	400.63		0.0	*
P-83B											
1Q12	445.47	1/3/2012	NE	38.58	NA	NA	NA	406.89	375.82 - 373.82 (69.65 - 71.65)	NA	*
2Q12		4/2/2012	NE	40.13	NA	NA	NA	405.34		0.0	*
3Q12		7/2/2012	NE	40.85	NA	NA	NA	404.62		0.0	*
4Q12		10/1/2012	NE	42.57	NA	NA	NA	402.90		0.0	*
1Q13		1/3/2013	NE	44.13	NA	NA	NA	401.34		0.0	*
2Q13		4/2/2013	NE	44.99	NA	NA	NA	400.48		0.0	*
3Q13		7/3/2013	NE	43.71	NA	NA	NA	401.76		0.0	*
4Q13		10/1/2013	NE	43.80	NA	NA	NA	401.67		0.2	*
1Q14		2/11/2014	NE	44.97	NA	NA	NA	400.50		0.3	*
2Q14		4/1/2014	NE	46.01	NA	NA	NA	399.46		0.0	*
3Q14		7/1/2014	NE	45.39	NA	NA	NA	400.08		0.0	*
4Q14		10/1/2014	NE	44.87	NA	NA	NA	400.60		0.0	*
P-83C											
1Q12	445.64	1/3/2012	NE	39.05	NA	NA	NA	406.59	353.25 - 351.25 (92.39 - 94.39)	NA	*
2Q12		4/2/2012	NE	40.61	NA	NA	NA	405.03		0.0	*
3Q12		7/2/2012	NE	40.96	NA	NA	NA	404.68		0.0	*
4Q12		10/1/2012	NE	43.04	NA	NA	NA	402.60		0.0	*
1Q13		1/3/2013	NE	44.59	NA	NA	NA	401.05		0.0	*
2Q13		4/2/2013	NE	45.41	NA	NA	NA	400.23		0.0	*
3Q13		7/3/2013	NE	44.17	NA	NA	NA	401.47		0.0	*
4Q13		10/1/2013	NE	44.27	NA	NA	NA	401.37		0.6	*
1Q14		2/11/2014	NE	45.43	NA	NA	NA	400.21		13.7	*
2Q14		4/1/2014	NE	46.40	NA	NA	NA	399.24		0.0	*
3Q14		7/1/2014	NE	45.84	NA	NA	NA	399.80		0.0	*
4Q14		10/1/2014	NE	45.00	NA	NA	NA	400.64		0.4	*
P-83D											
1Q12	445.55	1/3/2012	NE	39.01	NA	NA	NA	406.54	311.84 - 309.84 (133.71 - 135.71)	NA	*
2Q12		4/2/2012	NE	40.53	NA	NA	NA	405.02		0.0	*
3Q12		7/2/2012	NE	40.12	NA	NA	NA	405.43		0.0	*
4Q12		10/1/2012	NE	42.98	NA	NA	NA	402.57		0.0	*
1Q13		1/3/2013	NE	44.54	NA	NA	NA	401.01		0.0	*
2Q13		4/2/2013	NE	45.38	NA	NA	NA	400.17		0.0	*
3Q13		7/3/2013	NE	44.12	NA	NA	NA	401.43		0.0	*
4Q13		10/1/2013	NE	44.21	NA	NA	NA	401.34		0.1	*
1Q14		2/11/2014	NE	45.40	NA	NA	NA	400.15		0.4	*
2Q14		4/1/2014	NE	46.36	NA	NA	NA	399.19		0.0	*
3Q14		7/1/2014	NE	45.79	NA	NA	NA	399.76		0.0	*
4Q14		10/1/2014	NE	45.05	NA	NA	NA	400.50		0.1	*
P-84A											
1Q12	446.39	1/5/2012	NE	39.49	NA	NA	NA	406.90	397.89 - 382.89 (48.50 - 63.50)	1.3	*
2Q12		4/3/2012	NE	40.70	NA	NA	NA	405.69		0.0	*
3Q12		7/5/2012	NE	41.40	NA	NA	NA	404.99		0.0	*
4Q12		10/2/2012	NE	43.10	NA	NA	NA	403.29		0.0	*
1Q13		1/4/2013	NE	44.20	NA	NA	NA	402.19		0.0	*
2Q13		4/3/2013	NE	45.51	NA	NA	NA	400.88		0.0	*
3Q13		7/5/2013	NE	43.85	NA	NA	NA	402.54		0.0	*
4Q13		10/4/2013	NE	43.56	NA	NA	NA	402.83		0.2	*
1Q14		2/13/2014	NE	44.73	NA	NA	NA	401.66		0.0	*
2Q14		4/4/2014	NE	46.73	NA	NA	NA	399.66		0.3	*
3Q14		7/3/2014	NE	45.55	NA	NA	NA	400.84		0.0	*
4Q14		10/3/2014	NE	44.95	NA	NA	NA	401.44		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-84B											
1Q12	446.10	1/5/2012	NE	39.23	NA	NA	NA	406.87	372.60 - 370.60 (73.50 - 75.50)	0.1	*
2Q12		4/3/2012	NE	40.43	NA	NA	NA	405.67		0.0	*
3Q12		7/5/2012	NE	41.43	NA	NA	NA	404.67		0.0	*
4Q12		10/2/2012	NE	42.84	NA	NA	NA	403.26		0.1	*
1Q13		1/4/2013	NE	43.92	NA	NA	NA	402.18		0.0	*
2Q13		4/3/2013	NE	45.24	NA	NA	NA	400.86		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	402.51		0.0	*
4Q13		10/4/2013	NE	43.30	NA	NA	NA	402.80		0.0	*
1Q14		2/13/2014	NE	44.33	NA	NA	NA	401.77		0.0	*
2Q14		4/4/2014	NE	46.45	NA	NA	NA	399.65		0.0	*
3Q14		7/3/2014	NE	45.31	NA	NA	NA	400.79		0.0	*
4Q14		10/3/2014	NE	44.73	NA	NA	NA	401.37		0.0	*
P-84C											
1Q12	446.13	1/5/2012	NE	39.53	NA	NA	NA	406.60	352.08 - 350.08 (94.05 - 96.05)	7.3	*
2Q12		4/3/2012	NE	40.75	NA	NA	NA	405.38		0.0	*
3Q12		7/5/2012	NE	41.45	NA	NA	NA	404.68		0.0	*
4Q12		10/2/2012	NE	43.15	NA	NA	NA	402.98		0.0	*
1Q13		1/4/2013	NE	44.39	NA	NA	NA	401.74		0.0	*
2Q13		4/3/2013	NE	45.52	NA	NA	NA	400.61		0.0	*
3Q13		7/5/2013	NE	43.85	NA	NA	NA	402.28		0.0	*
4Q13		10/4/2013	NE	43.62	NA	NA	NA	402.51		0.0	*
1Q14		2/13/2014	NE	44.80	NA	NA	NA	401.33		0.0	*
2Q14		4/4/2014	NE	49.46	NA	NA	NA	396.67		0.7	*
3Q14		7/3/2014	NE	45.63	NA	NA	NA	400.50		0.0	*
4Q14		10/3/2014	NE	45.03	NA	NA	NA	401.10		1.1	*
P-84D											
1Q12	446.14	1/5/2012	NE	39.55	NA	NA	NA	406.59	324.99 - 322.99 (121.15 - 123.15)	0.4	*
2Q12		4/3/2012	NE	40.77	NA	NA	NA	405.37		0.0	*
3Q12		7/5/2012	NE	41.46	NA	NA	NA	404.68		0.0	*
4Q12		10/2/2012	NE	43.18	NA	NA	NA	402.96		0.4	*
1Q13		1/4/2013	NE	44.41	NA	NA	NA	401.73		0.0	*
2Q13		4/3/2013	NE	45.52	NA	NA	NA	400.62		0.0	*
3Q13		7/5/2013	NE	44.00	NA	NA	NA	402.14		0.0	*
4Q13		10/4/2013	NE	43.62	NA	NA	NA	402.52		0.0	*
1Q14		2/13/2014	NE	44.80	NA	NA	NA	401.34		0.0	*
2Q14		4/4/2014	NE	49.46	NA	NA	NA	396.68		0.0	*
3Q14		7/3/2014	NE	45.62	NA	NA	NA	400.52		0.0	*
4Q14		10/3/2014	NE	45.02	NA	NA	NA	401.12		0.0	*
P-88A											
1Q12	443.12	1/4/2012	NE	31.18	NA	NA	NA	411.94	404.72 - 389.72 (38.40 - 53.40)	0.0	*
2Q12		4/3/2012	NE	32.55	NA	NA	NA	410.57		0.0	*
3Q12		7/2/2012	NE	32.97	NA	NA	NA	410.15		0.0	*
4Q12		10/2/2012	NE	34.58	NA	NA	NA	408.54		0.0	*
1Q13		1/2/2013	NE	35.80	NA	NA	NA	407.32		0.0	*
2Q13		4/2/2013	NE	36.74	NA	NA	NA	406.38		0.0	*
3Q13		7/2/2013	NE	35.05	NA	NA	NA	408.07		0.0	*
4Q13		10/2/2013	NE	34.33	NA	NA	NA	408.79		0.0	*
1Q14		2/11/2014	NE	36.13	NA	NA	NA	406.99		0.2	*
2Q14		4/4/2014	NE	37.98	NA	NA	NA	405.14		0.1	*
3Q14		7/3/2014	NE	36.62	NA	NA	NA	406.50		0.0	*
4Q14		10/3/2014	NE	36.04	NA	NA	NA	407.08		0.1	*
P-88B											
1Q12	443.17	1/4/2012	NE	31.16	NA	NA	NA	412.01	371.17 - 369.17 (72.00 - 74.00)	0.0	*
2Q12		4/3/2012	NE	32.50	NA	NA	NA	410.67		0.0	*
3Q12		7/2/2012	NE	33.01	NA	NA	NA	410.16		0.0	*
4Q12		10/2/2012	NE	34.56	NA	NA	NA	408.61		0.0	*
1Q13		1/2/2013	NE	35.82	NA	NA	NA	407.35		0.0	*
2Q13		4/2/2013	NE	36.79	NA	NA	NA	406.38		0.0	*
3Q13		7/2/2013	NE	35.15	NA	NA	NA	408.02		0.0	*
4Q13		10/2/2013	NE	34.33	NA	NA	NA	408.84		0.0	*
1Q14		2/11/2014	NE	36.19	NA	NA	NA	406.98		0.3	*
2Q14		4/4/2014	NE	38.04	NA	NA	NA	405.13		0.5	*
3Q14		7/3/2014	NE	36.58	NA	NA	NA	406.59		0.0	*
4Q14		10/3/2014	NE	36.09	NA	NA	NA	407.08		0.1	*
P-88C											
1Q12	443.16	1/4/2012	NE	31.44	NA	NA	NA	411.72	350.86 - 348.86 (92.30 - 94.30)	0.0	*
2Q12		4/3/2012	NE	32.78	NA	NA	NA	410.38		0.0	*
3Q12		7/2/2012	NE	33.15	NA	NA	NA	410.01		0.0	*
4Q12		10/2/2012	NE	34.83	NA	NA	NA	408.33		0.0	*
1Q13		1/2/2013	NE	36.10	NA	NA	NA	407.06		0.0	*
2Q13		4/2/2013	NE	37.07	NA	NA	NA	406.09		0.5	*
3Q13		7/2/2013	NE	35.44	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.61	NA	NA	NA	408.55		0.0	*
1Q14		2/11/2014	NE	36.45	NA	NA	NA	406.71		0.2	*
2Q14		4/4/2014	NE	41.00	NA	NA	NA	402.16		0.2	*
3Q14		7/3/2014	NE	36.87	NA	NA	NA	406.29		0.0	*
4Q14		10/3/2014	NE	35.74	NA	NA	NA	407.42		0.3	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-88D											
1Q12	443.23	1/4/2012	NE	31.57	NA	NA	NA	411.66	329.53 - 327.53 (113.70 - 115.70)	0.0	*
2Q12		4/3/2012	NE	32.91	NA	NA	NA	410.32		0.0	*
3Q12		7/2/2012	NE	33.41	NA	NA	NA	409.82		0.0	*
4Q12		10/2/2012	NE	34.99	NA	NA	NA	408.24		0.0	*
1Q13		1/2/2013	NE	36.23	NA	NA	NA	407.00		0.0	*
2Q13		4/2/2013	NE	37.21	NA	NA	NA	406.02		1.6	*
3Q13		7/2/2013	NE	35.51	NA	NA	NA	407.72		0.0	*
4Q13		10/2/2013	NE	34.72	NA	NA	NA	408.51		0.0	*
1Q14		2/11/2014	NE	36.59	NA	NA	NA	406.64		1.7	*
2Q14		4/4/2014	NE	41.45	NA	NA	NA	401.78		0.1	*
3Q14		7/3/2014	NE	36.95	NA	NA	NA	406.28		0.6	*
4Q14		10/3/2014	NE	36.43	NA	NA	NA	406.80		0.0	*
P-89B											
1Q12	447.35	1/3/2012	NE	38.10	NA	NA	NA	409.25	369.99 - 367.99 (77.36 - 79.36)	NA	*
2Q12		4/2/2012	NE	39.30	NA	NA	NA	408.05		0.0	*
3Q12		7/2/2012	NE	40.09	NA	NA	NA	407.26		0.0	*
4Q12		10/1/2012	NE	41.62	NA	NA	NA	405.73		0.0	*
1Q13		1/3/2013	NE	43.23	NA	NA	NA	404.12		0.0	*
2Q13		4/1/2013	NE	43.96	NA	NA	NA	403.39		0.0	*
3Q13		7/3/2013	NE	42.83	NA	NA	NA	404.52		0.0	*
4Q13		10/1/2013	NE	42.67	NA	NA	NA	404.68		25.2	*
1Q14		2/12/2014	NE	44.24	NA	NA	NA	403.11		0.2	*
2Q14		4/1/2014	NE	45.09	NA	NA	NA	402.26		0.0	*
3Q14		7/1/2014	NE	44.59	NA	NA	NA	402.76		0.0	*
4Q14		10/2/2014	NE	44.19	NA	NA	NA	403.16		0.0	*
P-89C											
1Q12	447.68	1/3/2012	NE	38.42	NA	NA	NA	409.26	350.05 - 348.05 (97.63 - 99.63)	NA	*
2Q12		4/2/2012	NE	39.63	NA	NA	NA	408.05		0.0	*
3Q12		7/2/2012	NE	40.42	NA	NA	NA	407.26		0.0	*
4Q12		10/1/2012	NE	41.94	NA	NA	NA	405.74		0.0	*
1Q13		1/3/2013	NE	43.58	NA	NA	NA	404.10		0.0	*
2Q13		4/2/2013	NE	44.28	NA	NA	NA	403.40		1.7	*
3Q13		7/3/2013	NE	43.20	NA	NA	NA	404.48		2.3	*
4Q13		10/1/2013	NE	43.02	NA	NA	NA	404.66		0.1	*
1Q14		2/12/2014	NE	44.58	NA	NA	NA	403.10		186.4	*
2Q14		4/1/2014	NE	45.47	NA	NA	NA	402.21		0.0	*
3Q14		7/1/2014	NE	44.94	NA	NA	NA	402.74		0.0	*
4Q14		10/2/2014	NE	44.53	NA	NA	NA	403.15		0.0	*
P-89D											
1Q12	447.54	1/3/2012	NE	38.47	NA	NA	NA	409.07	307.20 - 305.20 (140.34 - 142.34)	NA	*
2Q12		4/2/2012	NE	39.56	NA	NA	NA	407.98		0.0	*
3Q12		7/2/2012	NE	40.36	NA	NA	NA	407.18		0.0	*
4Q12		10/1/2012	NE	41.94	NA	NA	NA	405.60		0.0	*
1Q13		1/3/2013	NE	43.52	NA	NA	NA	404.02		0.0	*
2Q13		4/1/2013	NE	44.20	NA	NA	NA	403.34		0.0	*
3Q13		7/3/2013	NE	43.20	NA	NA	NA	404.34		0.0	*
4Q13		10/1/2013	NE	43.01	NA	NA	NA	404.53		0.2	*
1Q14		2/12/2014	NE	44.68	NA	NA	NA	402.86		7.4	*
2Q14		4/1/2014	NE	45.45	NA	NA	NA	402.09		0.0	*
3Q14		7/1/2014	NE	44.92	NA	NA	NA	402.62		0.0	*
4Q14		10/2/2014	NE	44.55	NA	NA	NA	402.99		0.0	*
P-91A											
1Q12	447.19	1/3/2012	NE	42.91	NA	NA	NA	404.28	395.68 - 380.68 (51.52 - 66.52)	NA	*
2Q12		4/3/2012	NE	44.31	NA	NA	NA	402.88		0.0	*
3Q12		7/2/2012	NE	45.76	NA	NA	NA	401.43		0.0	*
4Q12		10/1/2012	NE	46.72	NA	NA	NA	400.47		0.5	*
1Q13		1/4/2013	NE	48.92	NA	NA	NA	398.27		0.0	*
2Q13		4/1/2013	NE	49.58	NA	NA	NA	397.61		0.4	*
3Q13		7/3/2013	NE	48.64	NA	NA	NA	398.55		182.3	*
4Q13		10/2/2013	NE	47.88	NA	NA	NA	399.31		14.8	*
1Q14		2/12/2014	48.21	54.71	392.48	398.98	6.50	397.68		178.7	*
2Q14		4/4/2014	50.20	55.10	392.09	396.99	4.90	396.01		15.9	*
3Q14		7/2/2014	48.74	52.68	394.51	398.45	3.94	397.66		295.2	*
4Q14		10/2/2014	48.10	51.99	395.20	399.09	3.89	398.31		22.9	*
P-91B											
1Q12	447.26	1/3/2012	NE	43.00	NA	NA	NA	404.26	372.57 - 370.57 (74.69 - 76.69)	NA	*
2Q12		4/3/2012	NE	44.11	NA	NA	NA	403.15		0.0	*
3Q12		7/2/2012	NE	45.74	NA	NA	NA	401.52		0.0	*
4Q12		10/1/2012	NE	46.79	NA	NA	NA	400.47		0.6	*
1Q13		1/4/2013	NE	49.10	NA	NA	NA	398.16		0.0	*
2Q13		4/1/2013	NE	49.70	NA	NA	NA	397.56		0.0	*
3Q13		7/3/2013	NE	48.72	NA	NA	NA	398.54		2.5	*
4Q13		10/2/2013	NE	48.04	NA	NA	NA	399.22		0.0	*
1Q14		2/12/2014	NE	49.61	NA	NA	NA	397.65		9.5	*
2Q14		4/4/2014	NE	51.19	NA	NA	NA	396.07		0.4	*
3Q14		7/2/2014	NE	49.64	NA	NA	NA	397.62		17.5	*
4Q14		10/2/2014	NE	48.96	NA	NA	NA	398.30		29.1	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-91C											
1Q12	447.02	1/3/2012	NE	42.74	NA	NA	NA	404.28	352.29 - 350.29 (94.73 - 96.73)	NA	*
2Q12		4/3/2012	NE	44.11	NA	NA	NA	402.91		0.0	*
3Q12		7/2/2012	NE	45.53	NA	NA	NA	401.49		0.0	*
4Q12		10/1/2012	NE	46.54	NA	NA	NA	400.48		0.0	*
1Q13		1/4/2013	NE	48.84	NA	NA	NA	398.18		0.0	*
2Q13		4/2/2013	NE	49.40	NA	NA	NA	397.62		0.2	*
3Q13		7/3/2013	NE	48.46	NA	NA	NA	398.56		0.0	*
4Q13		10/2/2013	NE	47.77	NA	NA	NA	399.25		0.6	*
1Q14		2/12/2014	NE	49.36	NA	NA	NA	397.66		2.7	*
2Q14		4/4/2014	NE	51.00	NA	NA	NA	396.02		0.2	*
3Q14		7/2/2014	NE	49.39	NA	NA	NA	397.63		0.3	*
4Q14		10/2/2014	NE	48.71	NA	NA	NA	398.31		0.1	*
P-91D											
1Q12	447.02	1/3/2012	NE	42.73	NA	NA	NA	404.29	278.70 - 276.70 (168.32 - 170.32)	NA	*
2Q12		4/3/2012	NE	44.35	NA	NA	NA	402.67		0.0	*
3Q12		7/2/2012	NE	45.55	NA	NA	NA	401.47		0.0	*
4Q12		10/1/2012	NE	46.53	NA	NA	NA	400.49		0.0	*
1Q13		1/4/2013	NE	48.82	NA	NA	NA	398.20		0.0	*
2Q13		4/1/2013	NE	49.42	NA	NA	NA	397.60		0.0	*
3Q13		7/3/2013	NE	48.46	NA	NA	NA	398.56		6.6	*
4Q13		10/2/2013	NE	47.76	NA	NA	NA	399.26		1.9	*
1Q14		2/12/2014	NE	49.35	NA	NA	NA	397.67		6.2	*
2Q14		4/4/2014	NE	51.02	NA	NA	NA	396.00		6.9	*
3Q14		7/2/2014	NE	49.37	NA	NA	NA	397.65		0.4	*
4Q14		10/2/2014	NE	48.71	NA	NA	NA	398.31		0.0	*
P-92A											
1Q12	446.12	1/4/2012	41.05	41.07	405.05	405.07	0.02	405.07	398.55 - 383.55 (47.57 - 62.57)	0.0	*
2Q12		4/3/2012	NE	42.77	NA	NA	NA	403.35		0.0	*
3Q12		7/3/2012	44.06	44.08	402.04	402.06	0.02	402.06		0.0	*
4Q12		10/1/2012	NE	45.04	NA	NA	NA	401.08		3.5	*
1Q13		1/4/2013	46.83	46.84	399.28	399.29	0.01	399.29		0.0	*
2Q13		4/1/2013	47.59	47.71	398.41	398.53	0.12	398.51		105.0	
3Q13		7/5/2013	46.31	46.40	399.72	399.81	0.09	399.79		17.0	*
4Q13		10/2/2013	45.36	45.42	400.70	400.76	0.06	400.75		55.1	*
1Q14		2/12/2014	47.20	47.28	398.84	398.92	0.08	398.90		153.9	*
2Q14		4/4/2014	49.06	49.16	396.96	397.06	0.10	397.04		0.9	
3Q14		7/2/2014	47.55	47.57	398.55	398.57	0.02	398.57		17.5	*
4Q14		10/2/2014	46.73	46.76	399.36	399.39	0.03	399.38		130.2	*
P-92B											
1Q12	446.07	1/4/2012	NE	41.02	NA	NA	NA	405.05	372.42 - 370.42 (73.65 - 75.65)	0.1	*
2Q12		4/3/2012	NE	42.74	NA	NA	NA	403.33		0.0	*
3Q12		7/3/2012	NE	44.02	NA	NA	NA	402.05		0.0	*
4Q12		10/1/2012	NE	44.97	NA	NA	NA	401.10		3.4	*
1Q13		1/4/2013	NE	46.80	NA	NA	NA	399.27		0.0	*
2Q13		4/1/2013	NE	47.57	NA	NA	NA	398.50		1.9	*
3Q13		7/5/2013	NE	46.29	NA	NA	NA	399.78		0.0	*
4Q13		10/2/2013	NE	45.31	NA	NA	NA	400.76		0.3	*
1Q14		2/12/2014	NE	47.12	NA	NA	NA	398.95		1.7	*
2Q14		4/4/2014	NE	49.03	NA	NA	NA	397.04		0.2	*
3Q14		7/2/2014	NE	47.52	NA	NA	NA	398.55		0.0	*
4Q14		10/2/2014	NE	46.70	NA	NA	NA	399.37		0.6	*
P-92C											
1Q12	445.98	1/4/2012	NE	39.95	NA	NA	NA	406.03	352.54 - 350.54 (93.44 - 95.44)	0.1	*
2Q12		4/3/2012	NE	42.61	NA	NA	NA	403.37		0.0	*
3Q12		7/3/2012	NE	44.07	NA	NA	NA	401.91		0.0	*
4Q12		10/1/2012	NE	45.04	NA	NA	NA	400.94		0.0	*
1Q13		1/4/2013	NE	46.83	NA	NA	NA	399.15		0.0	*
2Q13		4/1/2013	NE	47.47	NA	NA	NA	398.51		0.0	*
3Q13		7/5/2013	NE	46.31	NA	NA	NA	399.67		0.4	*
4Q13		10/2/2013	NE	45.33	NA	NA	NA	400.65		0.8	*
1Q14		2/12/2014	NE	47.29	NA	NA	NA	398.69		0.2	*
2Q14		4/4/2014	NE	48.80	NA	NA	NA	397.18		0.4	*
3Q14		7/2/2014	NM	NM	NA	NA	NA	NA		NM	Well Damaged.
4Q14		10/2/2014	NM	NM	NA	NA	NA	NA		NM	Well Damaged.
P-92D											
1Q12	445.90	1/4/2012	NE	39.89	NA	NA	NA	406.01	304.90 - 302.90 (141.00 - 143.00)	0.0	*
2Q12		4/3/2012	NE	42.67	NA	NA	NA	403.23		0.0	*
3Q12		7/3/2012	NE	43.96	NA	NA	NA	401.94		0.0	*
4Q12		10/1/2012	NE	44.82	NA	NA	NA	401.08		0.0	*
1Q13		1/4/2013	NE	46.72	NA	NA	NA	399.18		0.0	*
2Q13		4/1/2013	NE	47.47	NA	NA	NA	398.43		0.0	*
3Q13		7/5/2013	NE	46.22	NA	NA	NA	399.68		0.0	*
4Q13		10/2/2013	NE	45.21	NA	NA	NA	400.69		0.1	*
1Q14		2/12/2014	NE	47.07	NA	NA	NA	398.83		0.4	*
2Q14		4/4/2014	NE	48.94	NA	NA	NA	396.96		0.3	*
3Q14		7/2/2014	NE	47.42	NA	NA	NA	398.48		0.0	*
4Q14		10/2/2014	NE	46.62	NA	NA	NA	399.28		0.2	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-93A											
1Q12	446.58	1/4/2012	NE	41.32	NA	NA	NA	405.26	398.41 - 383.41 (48.17 - 63.17)	0.0	*
2Q12		4/3/2012	NE	42.72	NA	NA	NA	403.86		0.0	*
3Q12		7/5/2012	NE	42.95	NA	NA	NA	403.63		0.0	*
4Q12		10/2/2012	NE	44.72	NA	NA	NA	401.86		0.0	*
1Q13		1/8/2013	NE	45.73	NA	NA	NA	400.85		0.0	*
2Q13		4/2/2013	NE	46.58	NA	NA	NA	400.00		0.0	*
3Q13		7/5/2013	NE	43.68	NA	NA	NA	402.90		0.0	*
4Q13		10/2/2013	NE	44.00	NA	NA	NA	402.58		0.1	*
1Q14		2/12/2014	NE	46.53	NA	NA	NA	400.05		3.6	*
2Q14		4/4/2014	NE	47.28	NA	NA	NA	399.30		1.3	*
3Q14		7/1/2014	NE	46.10	NA	NA	NA	400.48		0.0	*
4Q14		10/3/2014	NE	45.09	NA	NA	NA	401.49		2.2	*
P-93B											
1Q12	446.46	1/4/2012	NE	41.38	NA	NA	NA	405.08	371.86 - 369.86 (74.60 - 76.60)	0.0	*
2Q12		4/3/2012	NE	42.80	NA	NA	NA	403.66		0.8	*
3Q12		7/5/2012	NE	42.86	NA	NA	NA	403.60		0.0	*
4Q12		10/2/2012	NE	44.80	NA	NA	NA	401.66		0.0	*
1Q13		1/8/2013	NE	45.77	NA	NA	NA	400.69		0.0	*
2Q13		4/2/2013	NE	46.70	NA	NA	NA	399.76		0.0	*
3Q13		7/5/2013	NE	43.71	NA	NA	NA	402.75		0.0	*
4Q13		10/2/2013	NE	44.09	NA	NA	NA	402.37		18.4	*
1Q14		2/12/2014	NE	46.58	NA	NA	NA	399.88		70.0	*
2Q14		4/4/2014	NE	47.33	NA	NA	NA	399.13		0.5	*
3Q14		7/1/2014	NE	46.15	NA	NA	NA	400.31		0.0	*
4Q14		10/3/2014	NE	45.13	NA	NA	NA	401.33		1.0	*
P-93C											
1Q12	446.51	1/4/2012	NE	41.27	NA	NA	NA	405.24	352.26 - 350.26 (94.26 - 96.26)	1.5	*
2Q12		4/3/2012	NE	42.62	NA	NA	NA	403.89		0.5	*
3Q12		7/5/2012	NE	42.98	NA	NA	NA	403.53		0.3	*
4Q12		10/2/2012	NE	44.68	NA	NA	NA	401.83		0.2	*
1Q13		1/8/2013	NE	45.66	NA	NA	NA	400.85		0.0	*
2Q13		4/2/2013	NE	46.51	NA	NA	NA	400.00		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	402.92		0.0	*
4Q13		10/2/2013	NE	43.94	NA	NA	NA	402.57		0.3	*
1Q14		2/12/2014	NE	46.44	NA	NA	NA	400.07		1.3	*
2Q14		4/4/2014	NE	47.20	NA	NA	NA	399.31		0.0	*
3Q14		7/1/2014	NE	46.03	NA	NA	NA	400.48		0.0	*
4Q14		10/3/2014	NE	45.01	NA	NA	NA	401.50		0.4	*
P-93D											
1Q12	446.89	1/4/2012	NE	41.41	NA	NA	NA	405.48	321.14 - 319.14 (125.75 - 127.75)	0.1	*
2Q12		4/3/2012	NE	42.81	NA	NA	NA	404.08		0.0	*
3Q12		7/5/2012	NE	43.02	NA	NA	NA	403.87		0.0	*
4Q12		10/2/2012	NE	44.43	NA	NA	NA	402.46		0.6	*
1Q13		1/8/2013	NE	45.84	NA	NA	NA	401.05		0.0	*
2Q13		4/2/2013	NE	46.67	NA	NA	NA	400.22		0.0	*
3Q13		7/5/2013	NE	43.75	NA	NA	NA	403.14		0.0	*
4Q13		10/2/2013	NE	44.06	NA	NA	NA	402.83		0.2	*
1Q14		2/12/2014	NE	46.62	NA	NA	NA	400.27		4.1	*
2Q14		4/4/2014	NE	47.36	NA	NA	NA	399.53		3.1	*
3Q14		7/1/2014	NE	46.17	NA	NA	NA	400.72		0.0	*
4Q14		10/3/2014	NE	45.16	NA	NA	NA	401.73		14.4	*
P-94											
1Q12	444.65	1/3/2012	NE	34.75	NA	NA	NA	409.90	398.80 - 383.80 (45.85 - 60.85)	NA	*
2Q12		4/2/2012	NE	35.68	NA	NA	NA	408.97		0.1	*
3Q12		7/2/2012	NE	36.20	NA	NA	NA	408.45		0.0	*
4Q12		10/1/2012	NE	38.02	NA	NA	NA	406.63		0.0	*
1Q13		1/3/2013	NE	39.75	NA	NA	NA	404.90		0.0	*
2Q13		4/2/2013	NE	40.64	NA	NA	NA	404.01		0.0	*
3Q13		7/3/2013	NE	38.49	NA	NA	NA	406.16		0.0	*
4Q13		10/1/2013	NE	39.17	NA	NA	NA	405.48		2.6	*
1Q14		2/11/2014	NE	40.93	NA	NA	NA	403.72		0.4	*
2Q14		4/1/2014	NE	41.85	NA	NA	NA	402.80		0.0	*
3Q14		7/1/2014	NE	41.46	NA	NA	NA	403.19		0.0	*
4Q14		10/1/2014	NE	41.10	NA	NA	NA	403.55		0.0	*
P-95											
1Q12	443.44	1/5/2012	NE	29.50	NA	NA	NA	413.94	406.92 - 391.92 (36.52 - 51.52)	0.0	*
2Q12		4/3/2012	NE	30.58	NA	NA	NA	412.86		0.0	*
3Q12		7/3/2012	NE	31.04	NA	NA	NA	412.40		0.0	*
4Q12		10/2/2012	NE	32.52	NA	NA	NA	410.92		0.0	*
1Q13		1/2/2013	NE	33.87	NA	NA	NA	409.57		0.0	*
2Q13		4/2/2013	NE	34.91	NA	NA	NA	408.53		0.2	*
3Q13		7/2/2013	NE	33.31	NA	NA	NA	410.13		0.0	*
4Q13		10/2/2013	NE	32.59	NA	NA	NA	410.85		0.0	*
1Q14		2/10/2014	NE	34.28	NA	NA	NA	409.16		1.2	*
2Q14		4/4/2014	NE	36.19	NA	NA	NA	407.25		0.0	*
3Q14		7/3/2014	NE	34.73	NA	NA	NA	408.71		0.0	*
4Q14		10/3/2014	NE	34.39	NA	NA	NA	409.05		0.0	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-102											
1Q12	444.91	1/4/2012	NE	32.45	NA	NA	NA	412.46	402.16 - 382.16 (42.75 - 62.75)	0.0	*
2Q12		4/3/2012	NE	33.41	NA	NA	NA	411.50		0.0	*
3Q12		7/2/2012	NE	34.10	NA	NA	NA	410.81		0.0	*
4Q12		10/2/2012	NE	35.69	NA	NA	NA	409.22		0.0	*
1Q13		1/2/2013	NE	36.98	NA	NA	NA	407.93		0.0	*
2Q13		4/2/2013	NE	37.95	NA	NA	NA	406.96		0.2	*
3Q13		7/2/2013	NE	36.53	NA	NA	NA	408.38		0.0	*
4Q13		10/2/2013	NE	36.24	NA	NA	NA	408.67		20.0	*
1Q14		2/11/2014	NE	37.81	NA	NA	NA	407.10		2.9	*
2Q14		4/4/2014	NE	38.55	NA	NA	NA	406.36		7.5	*
3Q14		7/3/2014	NE	38.25	NA	NA	NA	406.66		0.0	*
4Q14		10/3/2014	NE	37.87	NA	NA	NA	407.04		6.8	*
P-114											
1Q12	432.41	1/3/2012	NE	26.88	NA	NA	NA	405.53	399.73 - 379.73 (32.67 - 52.67)	0.0	*
2Q12		4/2/2012	NE	28.33	NA	NA	NA	404.08		0.0	*
3Q12		7/3/2012	NE	28.39	NA	NA	NA	404.02		0.0	*
4Q12		10/2/2012	NE	30.51	NA	NA	NA	401.90		0.0	*
1Q13		1/7/2013	NE	30.22	NA	NA	NA	402.19		0.0	*
2Q13		4/2/2013	NE	31.99	NA	NA	NA	400.42		0.9	*
3Q13		7/2/2013	NE	27.65	NA	NA	NA	404.76		0.3	*
4Q13		10/2/2013	NE	29.03	NA	NA	NA	403.38		0.0	*
1Q14		2/11/2014	NE	32.11	NA	NA	NA	400.30		0.5	*
2Q14		4/4/2014	NM	NM	NA	NA	NA	NA		NM	
3Q14		7/2/2014	NE	30.87	NA	NA	NA	401.54		3.5	*
4Q14		10/3/2014	NE	29.83	NA	NA	NA	402.58		0.4	*
P-115											
1Q12	433.31	1/3/2012	NE	27.86	NA	NA	NA	405.45	401.01 - 381.01 (32.30 - 52.30)	0.0	*
2Q12		4/2/2012	NE	29.30	NA	NA	NA	404.01		0.0	*
3Q12		7/3/2012	NE	29.35	NA	NA	NA	403.96		0.0	*
4Q12		10/2/2012	NE	31.51	NA	NA	NA	401.80		0.0	*
1Q13		1/7/2013	NE	32.60	NA	NA	NA	400.71		0.0	
2Q13		4/2/2013	NE	32.92	NA	NA	NA	400.39		0.5	
3Q13		7/2/2013	NE	28.30	NA	NA	NA	405.01		0.5	*
4Q13		10/2/2013	NE	29.99	NA	NA	NA	403.32		0.0	*
1Q14		2/11/2014	NE	33.07	NA	NA	NA	400.24		0.6	
2Q14		4/7/2014	NE	33.10	NA	NA	NA	400.21		57.2	
3Q14		7/2/2014	NE	31.61	NA	NA	NA	401.70		0.9	*
4Q14		10/3/2014	NE	30.52	NA	NA	NA	402.79		0.2	*
P-116											
1Q12	436.45	1/3/2012	NE	31.35	NA	NA	NA	405.10	399.01 - 379.01 (37.44 - 57.44)	0.0	*
2Q12		4/2/2012	NE	32.72	NA	NA	NA	403.73		0.0	*
3Q12		7/3/2012	NE	32.80	NA	NA	NA	403.65		0.0	*
4Q12		10/2/2012	NE	34.97	NA	NA	NA	401.48		0.0	*
1Q13		1/7/2013	NE	36.10	NA	NA	NA	400.35		0.0	*
2Q13		4/2/2013	NE	36.32	NA	NA	NA	400.13		3.9	*
3Q13		7/2/2013	NE	31.49	NA	NA	NA	404.96		0.0	*
4Q13		10/2/2013	NE	33.43	NA	NA	NA	403.02		18.3	*
1Q14		2/11/2014	NE	36.50	NA	NA	NA	399.95		0.9	*
2Q14		4/4/2014	NE	36.91	NA	NA	NA	399.54		0.1	*
3Q14		7/2/2014	NE	34.94	NA	NA	NA	401.51		0.8	*
4Q14		10/3/2014	NE	33.85	NA	NA	NA	402.60		0.2	*
P-117											
1Q12	432.67	1/3/2012	NE	27.56	NA	NA	NA	405.11	399.74 - 379.74 (32.93 - 52.93)	0.0	*
2Q12		4/2/2012	NE	29.00	NA	NA	NA	403.67		0.0	*
3Q12		7/3/2012	NE	29.00	NA	NA	NA	403.67		0.0	*
4Q12		10/2/2012	NE	31.19	NA	NA	NA	401.48		0.0	*
1Q13		1/7/2013	NE	32.45	NA	NA	NA	400.22		0.0	*
2Q13		4/2/2013	NE	32.51	NA	NA	NA	400.16		75.8	*
3Q13		7/2/2013	NE	27.61	NA	NA	NA	405.06		0.0	*
4Q13		10/2/2013	NE	29.63	NA	NA	NA	403.04		0.0	*
1Q14		2/11/2014	NE	32.77	NA	NA	NA	399.90		0.6	*
2Q14		4/4/2014	NE	33.14	NA	NA	NA	399.53		0.0	
3Q14		7/2/2014	NE	31.10	NA	NA	NA	401.57		1.0	*
4Q14		10/3/2014	NE	30.03	NA	NA	NA	402.64		0.0	*
P-118											
1Q12	431.32	1/3/2012	NE	26.78	NA	NA	NA	404.54	400.20 - 384.27 (31.12 - 47.05)	0.0	*
2Q12		4/2/2012	NE	28.13	NA	NA	NA	403.19		0.0	*
3Q12		7/3/2012	NE	28.12	NA	NA	NA	403.20		0.0	*
4Q12		10/2/2012	NE	30.40	NA	NA	NA	400.92		0.0	*
1Q13		1/7/2013	NE	31.60	NA	NA	NA	399.72		0.0	
2Q13		4/2/2013	NE	31.53	NA	NA	NA	399.79		0.2	
3Q13		7/2/2013	NE	26.10	NA	NA	NA	405.22		0.0	*
4Q13		10/2/2013	NE	28.82	NA	NA	NA	402.50		0.0	*
1Q14		2/11/2014	NE	31.91	NA	NA	NA	399.41		5.3	
2Q14		4/4/2014	NE	32.11	NA	NA	NA	399.21		0.0	
3Q14		7/2/2014	NE	29.78	NA	NA	NA	401.54		0.8	*
4Q14		10/3/2014	NE	28.71	NA	NA	NA	402.61		0.5	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-119											
1Q12	431.92	1/3/2012	NE	29.80	NA	NA	NA	402.12	401.25 - 385.32 (30.67 - 46.60)	0.0	*
2Q12		4/2/2012	NE	27.21	NA	NA	NA	404.71		0.0	*
3Q12		7/3/2012	NE	27.40	NA	NA	NA	404.52		0.0	*
4Q12		10/2/2012	NE	29.45	NA	NA	NA	402.47		0.0	*
1Q13		1/7/2013	NE	30.46	NA	NA	NA	401.46		0.0	*
2Q13		4/2/2013	NE	31.10	NA	NA	NA	400.82		0.4	
3Q13		7/2/2013	NE	27.48	NA	NA	NA	404.44		0.0	*
4Q13		10/2/2013	NE	28.09	NA	NA	NA	403.83		0.0	*
1Q14		2/11/2014	NE	31.03	NA	NA	NA	400.89		1.0	
2Q14		4/4/2014	NE	31.55	NA	NA	NA	400.37		0.0	
3Q14		7/2/2014	NE	30.06	NA	NA	NA	401.86		1.1	*
4Q14		10/3/2014	NE	29.14	NA	NA	NA	402.78		0.0	*
P-120											
1Q12	432.78	1/3/2012	NE	26.22	NA	NA	NA	406.56	401.40 - 385.47 (31.38 - 47.31)	0.0	*
2Q12		4/4/2012	NE	27.58	NA	NA	NA	405.20		0.0	*
3Q12		7/3/2012	NE	27.84	NA	NA	NA	404.94		0.0	*
4Q12		10/2/2012	NE	29.90	NA	NA	NA	402.88		0.0	*
1Q13		1/7/2013	NE	31.00	NA	NA	NA	401.78		0.0	*
2Q13		4/2/2013	NE	31.42	NA	NA	NA	401.36		0.0	
3Q13		7/2/2013	NE	27.26	NA	NA	NA	405.52		0.0	*
4Q13		10/2/2013	NE	28.43	NA	NA	NA	404.35		0.0	*
1Q14		2/11/2014	NE	31.38	NA	NA	NA	401.40		1.0	
2Q14		4/4/2014	NE	32.01	NA	NA	NA	400.77		0.0	
3Q14		7/2/2014	NE	30.11	NA	NA	NA	402.67		1.0	*
4Q14		10/3/2014	NE	29.22	NA	NA	NA	403.56		0.9	*
P-129											
1Q12	432.46	1/5/2012	NE	29.31	NA	NA	NA	403.15	400.49 - 384.56 (31.97 - 47.90)	0.5	*
2Q12		4/2/2012	NE	30.31	NA	NA	NA	402.15		0.0	*
3Q12		7/3/2012	NE	30.33	NA	NA	NA	402.13		0.0	*
4Q12		10/2/2012	NE	32.84	NA	NA	NA	399.62		0.0	
1Q13		1/7/2013	NE	34.12	NA	NA	NA	398.34		0.0	
2Q13		4/2/2013	NE	33.30	NA	NA	NA	399.16		3.5	
3Q13		7/2/2013	NE	26.81	NA	NA	NA	405.65		0.0	*
4Q13		10/2/2013	NE	31.35	NA	NA	NA	401.11		0.0	*
1Q14		2/11/2014	NE	34.37	NA	NA	NA	398.09		1.6	
2Q14		4/4/2014	NE	34.27	NA	NA	NA	398.19		0.0	
3Q14		7/2/2014	NE	30.93	NA	NA	NA	401.53		0.7	*
4Q14		10/3/2014	NE	30.31	NA	NA	NA	402.15		0.0	*
GP-9-PZ											
1Q12	442.41	1/4/2012	NE	38.13	NA	NA	NA	404.28	404.81 - 394.81 (37.60 - 47.60)	40.0	
2Q12		4/3/2012	NE	39.51	NA	NA	NA	402.90		0.0	
3Q12		7/5/2012	NE	39.62	NA	NA	NA	402.79		0.0	
4Q12		10/2/2012	NE	41.32	NA	NA	NA	401.09		0.0	
1Q13		1/4/2013	NE	42.21	NA	NA	NA	400.20		0.0	
2Q13		4/2/2013	NE	42.90	NA	NA	NA	399.51		0.0	
3Q13		7/5/2013	NE	40.22	NA	NA	NA	402.19		0.0	
4Q13		10/2/2013	NE	40.98	NA	NA	NA	401.43		1.1	
1Q14		2/13/2014	NM	NM	NA	NA	NA	NA		NM	
2Q14		4/4/2014	NE	44.86	NA	NA	NA	397.55		0.5	
3Q14		7/2/2014	NE	42.66	NA	NA	NA	399.75		0.0	
4Q14		10/3/2014	NE	41.85	NA	NA	NA	400.56		0.0	
ROST-3-MW (ROST-3-PZ)											
1Q12	442.29	1/3/2012	NE	37.33	NA	NA	NA	404.96	402.29 - 392.29 (40.00 - 50.00)	0.0	*
2Q12		4/2/2012	NE	38.57	NA	NA	NA	403.72		0.0	*
3Q12		7/2/2012	NE	38.84	NA	NA	NA	403.45		0.0	*
4Q12		10/1/2012	NE	40.55	NA	NA	NA	401.74		0.0	
1Q13		1/2/2013	NE	41.50	NA	NA	NA	400.79	404.48 - 394.48 (37.81 - 47.81)	0.0	2" Well Installed to replace ROST-3-PZ
2Q13		4/1/2013	NE	42.26	NA	NA	NA	400.03		5.6	
3Q13		7/1/2013	NE	39.83	NA	NA	NA	402.46		147.0	
4Q13		10/1/2013	NE	39.98	NA	NA	NA	402.31		267.2	
1Q14		2/10/2014	NE	42.20	NA	NA	NA	400.09		2.6	
2Q14		4/1/2014	NE	42.68	NA	NA	NA	399.61		1.2	
3Q14		7/1/2014	NE	42.10	NA	NA	NA	400.19		0.1	
4Q14		10/1/2014	NE	41.16	NA	NA	NA	401.13		0.0	
ROST-4-PZ											
1Q12	442.13	1/3/2012	NE	36.62	NA	NA	NA	405.51	407.20 - 397.20 (34.93 - 44.93)	0.0	
2Q12		4/2/2012	37.81	37.84	404.29	404.32	0.03	404.31		0.0	
3Q12		7/2/2012	NE	38.24	NA	NA	NA	403.89		0.0	
4Q12		10/1/2012	NE	39.52	NA	NA	NA	402.61		0.0	
1Q13		1/2/2013	NE	40.52	NA	NA	NA	401.61		0.0	
2Q13		4/1/2013	41.38	41.46	400.67	400.75	0.08	400.73		0.3	
3Q13		7/1/2013	NE	39.60	NA	NA	NA	402.53		0.0	
4Q13		10/1/2013	NE	38.88	NA	NA	NA	403.25		38.9	
1Q14		2/10/2014	NE	40.97	NA	NA	NA	401.16		1.2	
2Q14		4/1/2014	NE	41.22	NA	NA	NA	400.91		0.3	
3Q14		7/1/2014	NE	41.42	NA	NA	NA	400.71		0.0	
4Q14		10/1/2014	NE	40.25	NA	NA	NA	401.88		4.4	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(A)											
1Q12	442.11	1/3/2012	NE	35.92	NA	NA	NA	406.19	407.34 - 397.34 (34.77 - 44.77)	0.0	
2Q12		4/2/2012	NE	37.17	NA	NA	NA	404.94		0.0	
3Q12		7/2/2012	NE	38.64	NA	NA	NA	403.47		0.0	
4Q12		10/1/2012	NE	38.95	NA	NA	NA	403.16		0.0	
1Q13		1/2/2013	NE	40.60	NA	NA	NA	401.51		0.0	
2Q13		4/1/2013	NE	41.86	NA	NA	NA	400.25		0.7	
3Q13		7/1/2013	NE	39.66	NA	NA	NA	402.45		0.2	
4Q13		10/1/2013	NE	38.76	NA	NA	NA	403.35		0.0	
1Q14		2/10/2014	NE	41.29	NA	NA	NA	400.82		0.6	
2Q14		4/1/2014	NE	41.81	NA	NA	NA	400.30		0.4	
3Q14		7/1/2014	NE	39.69	NA	NA	NA	402.42		0.0	
4Q14		10/1/2014	NE	39.74	NA	NA	NA	402.37		0.0	
ROST-4-PZ(B)											
1Q12	442.38	1/3/2012	NE	36.65	NA	NA	NA	405.73	407.33 - 397.33 (35.05 - 45.05)	0.0	
2Q12		4/2/2012	NE	37.87	NA	NA	NA	404.51		0.0	
3Q12		7/2/2012	NE	38.28	NA	NA	NA	404.10		0.0	
4Q12		10/1/2012	NE	39.62	NA	NA	NA	402.76		0.0	
1Q13		1/2/2013	NE	40.61	NA	NA	NA	401.77		0.0	
2Q13		4/1/2013	NE	41.55	NA	NA	NA	400.83		0.5	
3Q13		7/1/2013	NE	39.52	NA	NA	NA	402.86		0.0	
4Q13		10/1/2013	NE	38.58	NA	NA	NA	403.80		1.1	
1Q14		2/10/2014	NE	40.84	NA	NA	NA	401.54		0.3	
2Q14		4/1/2014	NE	41.18	NA	NA	NA	401.20		0.0	
3Q14		7/1/2014	NE	41.38	NA	NA	NA	401.00		0.0	
4Q14		10/1/2014	NE	40.00	NA	NA	NA	402.38		0.0	
ROST-4-PZ(C)											
1Q12	442.66	1/3/2012	NE	37.40	NA	NA	NA	405.26	407.71 - 397.71 (34.95 - 44.95)	0.0	
2Q12		4/2/2012	NE	38.62	NA	NA	NA	404.04		0.0	
3Q12		7/2/2012	NE	39.09	NA	NA	NA	403.57		0.0	
4Q12		10/1/2012	NE	40.43	NA	NA	NA	402.23		0.0	
1Q13		1/2/2013	NE	41.42	NA	NA	NA	401.24		0.0	
2Q13		4/1/2013	NE	42.34	NA	NA	NA	400.32		0.0	
3Q13		7/1/2013	NE	40.57	NA	NA	NA	402.09		0.2	
4Q13		10/1/2013	NE	39.77	NA	NA	NA	402.89		0.0	
1Q14		2/10/2014	NE	41.92	NA	NA	NA	400.74		0.2	
2Q14		4/1/2014	NE	42.19	NA	NA	NA	400.47		0.0	
3Q14		7/1/2014	NE	42.38	NA	NA	NA	400.28		0.0	
4Q14		10/1/2014	NE	41.28	NA	NA	NA	401.38		0.0	
ROST-4-PZ(D)											
1Q12	442.98	1/3/2012	37.23	37.68	405.30	405.75	0.45	405.66	408.01 - 398.01 (34.97 - 44.97)	0.0	
2Q12		4/2/2012	38.57	38.59	404.39	404.41	0.02	404.41		0.0	
3Q12		7/2/2012	NE	39.99	NA	NA	NA	402.99		0.0	
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		3.4	Well Dry
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q13		10/1/2013	NE	39.63	NA	NA	NA	403.35		0.0	
1Q14		2/10/2014	NE	41.78	NA	NA	NA	401.20		0.6	
2Q14		4/1/2014	NE	42.10	NA	NA	NA	400.88		0.6	
3Q14		7/1/2014	NE	42.22	NA	NA	NA	400.76		0.0	
4Q14		10/1/2014	NE	41.06	NA	NA	NA	401.92		0.0	
ROST-4-PZ(E)											
1Q12	441.96	1/3/2012	36.48	36.92	405.04	405.48	0.44	405.39	407.21 - 397.21 (34.75 - 44.75)	0.0	
2Q12		4/2/2012	37.72	38.11	403.85	404.24	0.39	404.16		0.0	
3Q12		7/2/2012	38.13	38.19	403.77	403.83	0.06	403.82		0.0	
4Q12		10/1/2012	39.28	39.31	402.65	402.68	0.03	402.67		0.0	
1Q13		1/2/2013	NE	40.02	NA	NA	NA	401.94		0.0	
2Q13		4/1/2013	NE	40.80	NA	NA	NA	401.16		1.2	
3Q13		7/1/2013	NE	39.58	NA	NA	NA	402.38		0.0	
4Q13		10/1/2013	NE	38.70	NA	NA	NA	403.26		1.9	
1Q14		2/10/2014	40.60	40.62	401.34	401.36	0.02	401.36		0.3	
2Q14		4/1/2014	NE	40.38	NA	NA	NA	401.58		0.0	
3Q14		7/1/2014	NE	40.59	NA	NA	NA	401.37		1.1	
4Q14		10/1/2014	NE	39.71	NA	NA	NA	402.25		0.0	
ROST-4-PZ(F)											
1Q12	442.12	1/3/2012	NE	36.83	NA	NA	NA	405.29	407.59 - 397.59 (34.53 - 44.53)	0.0	
2Q12		4/2/2012	NE	37.96	NA	NA	NA	404.16		0.0	
3Q12		7/2/2012	NE	38.29	NA	NA	NA	403.83		0.0	
4Q12		10/1/2012	NE	39.46	NA	NA	NA	402.66		0.0	
1Q13		1/2/2013	NE	40.30	NA	NA	NA	401.82		0.0	
2Q13		4/1/2013	NE	41.12	NA	NA	NA	401.00		0.8	
3Q13		7/1/2013	NE	39.67	NA	NA	NA	402.45		0.0	
4Q13		10/1/2013	NE	38.83	NA	NA	NA	403.29		1.0	
1Q14		2/10/2014	NE	40.22	NA	NA	NA	401.90		0.3	
2Q14		4/1/2014	NE	40.45	NA	NA	NA	401.67		1.0	
3Q14		7/1/2014	NE	40.51	NA	NA	NA	401.61		2.4	
4Q14		10/1/2014	NE	39.79	NA	NA	NA	402.33		0.0	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(G)											
1Q12	442.13	1/3/2012	NE	37.44	NA	NA	NA	404.69	407.85 - 397.85 (34.28 - 44.28)	0.0	
2Q12		4/2/2012	NE	38.61	NA	NA	NA	403.52		0.0	
3Q12		7/2/2012	NE	38.79	NA	NA	NA	403.34		0.0	
4Q12		10/1/2012	NE	40.54	NA	NA	NA	401.59		0.0	
1Q13		1/2/2013	NE	41.49	NA	NA	NA	400.64		0.0	
2Q13		4/1/2013	NE	42.14	NA	NA	NA	399.99		0.0	
3Q13		7/1/2013	NE	39.68	NA	NA	NA	402.45		49.3	
4Q13		10/1/2013	NE	40.22	NA	NA	NA	401.91		40.6	
1Q14		2/10/2014	NE	42.35	NA	NA	NA	399.78		0.1	
2Q14		4/1/2014	NE	42.79	NA	NA	NA	399.34		0.5	
3Q14		7/1/2014	NE	42.08	NA	NA	NA	400.05		0.2	
4Q14		10/1/2014	NE	41.26	NA	NA	NA	400.87		0.0	
ROST-5-PZ											
1Q12	442.22	1/3/2012	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	0.0	Well Dry
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/2/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q13		7/1/2013	NE	22.98	NA	NA	NA	419.24		0.6	
4Q13		10/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q14		2/10/2014	NE	NE	NA	NA	NA	NA		0.2	Well Dry
2Q14		4/3/2014	NE	NE	NA	NA	NA	NA		5.1	Well Dry
3Q14		7/2/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q14		10/1/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-7-PZ											
1Q12	442.19	1/3/2012	NE	23.64	NA	NA	NA	418.55	422.19 - 412.19 (20.00 - 30.00)	0.0	
2Q12		4/2/2012	NE	24.08	NA	NA	NA	418.11		0.0	
3Q12		7/2/2012	NE	23.33	NA	NA	NA	418.86		0.0	
4Q12		10/1/2012	NE	23.86	NA	NA	NA	418.33		0.0	
1Q13		1/3/2013	NM	NM	NA	NA	NA	NA		NM	
2Q13		4/1/2013	NE	25.51	NA	NA	NA	416.68		15.0	
3Q13		7/5/2013	NE	22.28	NA	NA	NA	419.91		12.5	
4Q13		10/1/2013	NE	22.41	NA	NA	NA	419.78		0.0	
1Q14		2/10/2014	NE	23.49	NA	NA	NA	418.70		0.3	
2Q14		4/3/2014	NE	23.88	NA	NA	NA	418.31		1.4	
3Q14		7/1/2014	NE	22.88	NA	NA	NA	419.31		0.0	
4Q14		10/1/2014	NE	21.81	NA	NA	NA	420.38		0.0	
ROST-10-PZ											
1Q12	444.51	1/3/2012	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	0.0	Well Dry
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/3/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		1.5	Well Dry
3Q13		7/1/2013	NE	NE	NA	NA	NA	NA		0.5	Well Dry
4Q13		10/1/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q14		2/10/2014	NE	NE	NA	NA	NA	NA		0.7	Well Dry
2Q14		4/2/2014	NE	NE	NA	NA	NA	NA		0.1	Well Dry
3Q14		7/1/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
4Q14		10/1/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-21-PZ											
1Q12	443.72	1/3/2012	NE	19.81	NA	NA	NA	423.91	433.72 - 423.72 (10.00 - 20.00)	0.0	
2Q12		4/2/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
3Q12		7/2/2012	NE	19.34	NA	NA	NA	424.38		0.0	
4Q12		10/1/2012	NE	NE	NA	NA	NA	NA		0.0	Well Dry
1Q13		1/3/2013	NE	NE	NA	NA	NA	NA		0.0	Well Dry
2Q13		4/1/2013	NE	NE	NA	NA	NA	NA		4.6	Well Dry
3Q13		7/1/2013	NE	18.42	NA	NA	NA	425.30		0.2	
4Q13		10/1/2013	NE	19.38	NA	NA	NA	424.34		1.9	
1Q14		2/10/2014	NE	NE	NA	NA	NA	NA		4.9	Well Dry
2Q14		4/1/2014	NE	NE	NA	NA	NA	NA		0.5	Well Dry
3Q14		7/1/2014	NE	19.13	NA	NA	NA	424.59		0.0	
4Q14		10/1/2014	NE	19.38	NA	NA	NA	424.34		0.0	
S-1											
1Q12	443.79	1/3/2012	NE	38.36	NA	NA	NA	405.43	Unknown	NA	
2Q12		4/3/2012	NE	39.83	NA	NA	NA	403.96		0.0	
3Q12		7/3/2012	NE	40.38	NA	NA	NA	403.41		0.0	
4Q12		10/1/2012	NE	41.93	NA	NA	NA	401.86		32.0	
1Q13		1/4/2013	NE	43.35	NA	NA	NA	400.44		0.0	
2Q13		4/1/2013	NE	44.20	NA	NA	NA	399.59		15.1	
3Q13		7/5/2013	NE	42.12	NA	NA	NA	401.67		126.0	
4Q13		10/2/2013	NE	41.99	NA	NA	NA	401.80		52.0	
1Q14		2/12/2014	43.95	43.96	399.83	399.84	0.01	399.84		123.9	
2Q14		4/4/2014	NE	45.28	NA	NA	NA	398.51		0.2	
3Q14		7/2/2014	44.00	44.01	399.78	399.79	0.01	399.79		195.7	
4Q14		10/2/2014	42.80	42.82	400.97	400.99	0.02	400.99		256.4	

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-1											
1Q12	445.40	1/3/2012	NM	NM	NA	NA	NA	NA	398.40 - 388.40 (47.00 - 57.00)	NM	Well replaced during 4Q11
2Q12		4/2/2012	NE	40.09	NA	NA	NA	405.31		0.6	*
3Q12		7/2/2012	NE	41.19	NA	NA	NA	404.21		0.3	*
4Q12		10/1/2012	NE	42.90	NA	NA	NA	402.50		0.2	*
1Q13		1/3/2013	NE	44.17	NA	NA	NA	401.23		0.0	*
2Q13		4/2/2013	NE	44.94	NA	NA	NA	400.46		0.3	*
3Q13		7/3/2013	NE	42.85	NA	NA	NA	402.55		4.2	*
4Q13		10/1/2013	NE	42.61	NA	NA	NA	402.79		1.5	*
1Q14		2/11/2014	NE	44.35	NA	NA	NA	401.05		1.1	*
2Q14		4/1/2014	NE	44.84	NA	NA	NA	400.56		0.0	*
3Q14		7/1/2014	NE	44.87	NA	NA	NA	400.53		0.0	*
4Q14		10/2/2014	NE	43.94	NA	NA	NA	401.46		0.2	*
T-2											
1Q12	443.13	1/3/2012	NE	34.44	NA	NA	NA	408.69	392.63 - 372.48 (50.50 - 70.65)	NA	*
2Q12		4/2/2012	NE	38.68	NA	NA	NA	404.45		0.0	*
3Q12		7/2/2012	NE	39.15	NA	NA	NA	403.98		0.0	*
4Q12		10/1/2012	NE	41.11	NA	NA	NA	402.02		0.3	*
1Q13		1/3/2013	NE	43.39	NA	NA	NA	399.74		0.0	*
2Q13		4/2/2013	NE	43.35	NA	NA	NA	399.78		0.7	*
3Q13		7/3/2013	NE	41.48	NA	NA	NA	401.65		0.0	*
4Q13		10/1/2013	NE	41.34	NA	NA	NA	401.79		0.0	*
1Q14		2/11/2014	NE	42.83	NA	NA	NA	400.30		0.7	*
2Q14		4/1/2014	NE	43.69	NA	NA	NA	399.44		0.0	*
3Q14		7/1/2014	NE	43.11	NA	NA	NA	400.02		0.0	*
4Q14		10/2/2014	NE	42.36	NA	NA	NA	400.77		0.0	*
T-3											
1Q12	450.91	1/4/2012	NE	45.83	NA	NA	NA	405.08	403.65 - 388.65 (47.26 - 62.26)	0.0	*
2Q12		4/2/2012	NE	47.09	NA	NA	NA	403.82		0.0	*
3Q12		7/2/2012	NE	48.00	NA	NA	NA	402.91		0.0	
4Q12		10/1/2012	NE	50.04	NA	NA	NA	400.87		7.3	
1Q13		1/4/2013	NE	51.55	NA	NA	NA	399.36		2.1	
2Q13		4/1/2013	NE	52.35	NA	NA	NA	398.56		0.0	
3Q13		7/3/2013	NE	50.95	NA	NA	NA	399.96		4.8	
4Q13		10/1/2013	NE	50.78	NA	NA	NA	400.13		10.2	
1Q14		2/12/2014	NE	52.01	NA	NA	NA	398.90		56.2	
2Q14		4/1/2014	NE	53.18	NA	NA	NA	397.73		0.0	
3Q14		7/2/2014	NE	52.21	NA	NA	NA	398.70		0.8	
4Q14		10/2/2014	NE	51.58	NA	NA	NA	399.33		3.4	
T-4											
1Q12	447.95	1/3/2012	NE	43.35	NA	NA	NA	404.60	398.24 - 383.24 (49.71 - 64.71)	NA	*
2Q12		4/3/2012	NE	45.47	NA	NA	NA	402.48		0.0	*
3Q12		7/3/2012	NE	46.57	NA	NA	NA	401.38		0.0	*
4Q12		10/1/2012	NE	46.78	NA	NA	NA	401.17		0.0	*
1Q13		1/4/2013	NE	48.60	NA	NA	NA	399.35		0.0	*
2Q13		4/1/2013	NE	49.26	NA	NA	NA	398.69		0.0	*
3Q13		7/3/2013	NE	49.33	NA	NA	NA	398.62		1.1	*
4Q13		10/1/2013	NE	47.84	NA	NA	NA	400.11		0.1	*
1Q14		2/12/2014	NE	49.97	NA	NA	NA	397.98		4.5	
2Q14		4/4/2014	NE	52.42	NA	NA	NA	395.53		0.3	
3Q14		7/1/2014	NE	49.71	NA	NA	NA	398.24		0.0	
4Q14		10/2/2014	NE	49.63	NA	NA	NA	398.32		0.1	*
T-5											
1Q12	443.46	1/3/2012	NE	37.31	NA	NA	NA	406.15	395.13 - 378.58 (48.33 - 64.88)	NA	*
2Q12		4/3/2012	NE	38.87	NA	NA	NA	404.59		0.0	*
3Q12		7/6/2012	NE	39.81	NA	NA	NA	403.65		0.0	*
4Q12		10/1/2012	NE	41.08	NA	NA	NA	402.38		9.8	*
1Q13		1/4/2013	NE	42.57	NA	NA	NA	400.89		0.0	*
2Q13		4/1/2013	NE	43.42	NA	NA	NA	400.04		0.0	*
3Q13		7/5/2013	NE	41.67	NA	NA	NA	401.79		0.0	*
4Q13		10/1/2013	NE	41.14	NA	NA	NA	402.32		18.2	*
1Q14		2/13/2014	NE	42.96	NA	NA	NA	400.50		174.5	*
2Q14		4/4/2014	NE	44.53	NA	NA	NA	398.93		8.0	*
3Q14		7/2/2014	NE	43.47	NA	NA	NA	399.99		5.4	*
4Q14		10/2/2014	NE	42.44	NA	NA	NA	401.02		0.5	*
T-6											
1Q12	446.55	1/4/2012	NE	41.46	NA	NA	NA	405.09	394.79 - 380.54 (51.76 - 66.01)	1.1	*
2Q12		4/3/2012	NE	42.88	NA	NA	NA	403.67		0.0	*
3Q12		7/5/2012	NE	43.06	NA	NA	NA	403.49		0.0	*
4Q12		10/2/2012	NE	44.86	NA	NA	NA	401.69		0.1	*
1Q13		1/4/2013	NE	45.84	NA	NA	NA	400.71		0.0	*
2Q13		4/2/2013	NE	46.69	NA	NA	NA	399.86		0.0	*
3Q13		7/5/2013	NE	43.81	NA	NA	NA	402.74		0.0	*
4Q13		10/1/2013	NE	44.28	NA	NA	NA	402.27		10.0	*
1Q14		2/12/2014	NE	46.63	NA	NA	NA	399.92		6.1	*
2Q14		4/4/2014	NE	47.43	NA	NA	NA	399.12		2.3	*
3Q14		7/1/2014	NE	46.23	NA	NA	NA	400.32		0.0	*
4Q14		10/3/2014	NE	45.18	NA	NA	NA	401.37		0.6	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-7											
1Q12	444.01	1/4/2012	37.05	37.08	406.93	406.96	0.03	406.95	395.29 - 380.29 (48.72 - 63.72)	0.7	*
2Q12		4/3/2012	38.45	38.45	405.56	405.56	0.00	405.56		0.0	*
3Q12		7/2/2012	38.90	38.96	405.05	405.11	0.06	405.10		0.0	*
4Q12		10/2/2012	40.80	40.83	403.18	403.21	0.03	403.20		0.3	*
1Q13		1/2/2013	41.66	41.67	402.34	402.35	0.01	402.35		2.4	*
2Q13		4/2/2013	NE	42.78	NA	NA	NA	401.23		9.2	*
3Q13		7/2/2013	NE	40.21	NA	NA	NA	403.80		0.0	*
4Q13		10/2/2013	NE	39.72	NA	NA	NA	404.29		5.1	*
1Q14		2/11/2014	NE	42.60	NA	NA	NA	401.41		4.7	*
2Q14		4/4/2014	NE	43.34	NA	NA	NA	400.67		2.5	*
3Q14		7/3/2014	NE	42.36	NA	NA	NA	401.65		2.4	*
4Q14		10/3/2014	NE	41.33	NA	NA	NA	402.68		6.9	*
T-12											
1Q12	444.69	1/4/2012	NE	40.64	NA	NA	NA	404.05	398.23 - 372.23 (46.46 - 72.46)	0.0	*
2Q12		4/3/2012	NE	42.06	NA	NA	NA	402.63		0.0	*
3Q12		7/5/2012	NE	42.05	NA	NA	NA	402.64		0.0	*
4Q12		10/2/2012	NE	43.86	NA	NA	NA	400.83		0.5	*
1Q13		1/4/2013	NE	44.65	NA	NA	NA	400.04		0.2	*
2Q13		4/2/2013	NE	45.19	NA	NA	NA	399.50		0.0	*
3Q13		7/5/2013	NE	43.59	NA	NA	NA	401.10		1.4	*
4Q13		10/1/2013	NE	43.64	NA	NA	NA	401.05		5.5	*
1Q14		2/13/2014	NE	45.26	NA	NA	NA	399.43		0.5	*
2Q14		4/4/2014	NE	46.38	NA	NA	NA	398.31		5.1	*
3Q14		7/1/2014	NE	45.31	NA	NA	NA	399.38		0.0	*
4Q14		10/3/2014	NE	44.63	NA	NA	NA	400.06		2.7	*
T-13											
1Q12	443.46	1/3/2012	NE	37.42	NA	NA	NA	406.04	396.46 - 370.46 (47.00 - 73.00)	NA	*
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		NM	
4Q12		10/2/2012	NE	40.81	NA	NA	NA	402.65		2.9	*
1Q13		1/2/2013	NE	41.96	NA	NA	NA	401.50		0.0	*
2Q13		4/3/2013	NE	42.96	NA	NA	NA	400.50		0.0	*
3Q13		7/5/2013	NE	40.79	NA	NA	NA	402.67		0.0	*
4Q13		10/3/2013	NE	40.72	NA	NA	NA	402.74		0.0	*
1Q14		2/10/2014	NE	42.54	NA	NA	NA	400.92		0.0	*
2Q14		4/4/2014	NE	43.19	NA	NA	NA	400.27		0.4	*
3Q14		7/1/2014	NE	42.79	NA	NA	NA	400.67		0.0	*
4Q14		10/1/2014	NE	41.98	NA	NA	NA	401.48		0.0	*
T-15											
1Q12	445.03	1/3/2012	NE	38.97	NA	NA	NA	406.06	396.99 - 370.99 (48.04 - 74.04)	NA	*
2Q12		4/2/2012	NE	40.28	NA	NA	NA	404.75		0.0	*
3Q12		7/2/2012	NE	40.90	NA	NA	NA	404.13		0.0	*
4Q12		10/1/2012	NE	42.81	NA	NA	NA	402.22		0.0	*
1Q13		1/3/2013	NE	44.24	NA	NA	NA	400.79		0.0	*
2Q13		4/2/2013	NE	45.11	NA	NA	NA	399.92		0.0	*
3Q13		7/3/2013	NE	43.58	NA	NA	NA	401.45		0.2	*
4Q13		10/1/2013	NE	43.48	NA	NA	NA	401.55		11.5	*
1Q14		2/11/2014	NE	44.75	NA	NA	NA	400.28		0.5	*
2Q14		4/1/2014	NE	45.69	NA	NA	NA	399.34		0.0	*
3Q14		7/1/2014	NE	45.12	NA	NA	NA	399.91		0.0	*
4Q14		10/1/2014	NE	44.41	NA	NA	NA	400.62		0.0	*
T-17											
1Q12	445.90	1/3/2012	NE	37.37	NA	NA	NA	408.53	401.80 - 375.80 (44.10 - 70.10)	NA	*
2Q12		4/2/2012	NE	38.79	NA	NA	NA	407.11		0.0	*
3Q12		7/2/2012	NE	39.29	NA	NA	NA	406.61		0.0	*
4Q12		10/1/2012	NE	40.92	NA	NA	NA	404.98		0.0	*
1Q13		1/3/2013	NE	42.70	NA	NA	NA	403.20		0.0	*
2Q13		4/2/2013	NE	43.61	NA	NA	NA	402.29		0.0	*
3Q13		7/3/2013	NE	42.34	NA	NA	NA	403.56		1.3	*
4Q13		10/1/2013	NE	42.46	NA	NA	NA	403.44		0.0	*
1Q14		2/11/2014	NE	43.93	NA	NA	NA	401.97		2.1	*
2Q14		4/1/2014	NE	45.04	NA	NA	NA	400.86		0.0	
3Q14		7/3/2014	NE	44.50	NA	NA	NA	401.40		0.0	
4Q14		10/1/2014	NE	44.00	NA	NA	NA	401.90		0.0	*
T-19											
1Q12	446.71	1/3/2012	41.97	41.98	404.73	404.74	0.01	404.74	395.94 - 369.94 (50.77 - 76.77)	NA	*
2Q12		4/3/2012	NE	44.09	NA	NA	NA	402.62		0.0	*
3Q12		7/3/2012	NE	45.36	NA	NA	NA	401.35		0.0	*
4Q12		10/1/2012	NE	45.41	NA	NA	NA	401.30		0.0	*
1Q13		1/4/2013	NE	47.44	NA	NA	NA	399.27		0.0	*
2Q13		4/1/2013	NE	48.09	NA	NA	NA	398.62		0.7	*
3Q13		7/3/2013	NE	48.04	NA	NA	NA	398.67		37.2	*
4Q13		10/1/2013	NE	46.40	NA	NA	NA	400.31		0.8	*
1Q14		2/12/2014	NE	48.54	NA	NA	NA	398.17		24.3	*
2Q14		4/4/2014	NE	50.98	NA	NA	NA	395.73		11.7	
3Q14		7/1/2014	NE	48.42	NA	NA	NA	398.29		4.6	*
4Q14		10/2/2014	NE	48.28	NA	NA	NA	398.43		20.1	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-21											
1Q12	444.00	1/4/2012	NE	29.56	NA	NA	NA	414.44	412.04 - 386.04 (31.96 - 57.96)	0.0	*
2Q12		4/3/2012	NE	30.65	NA	NA	NA	413.35		0.0	*
3Q12		7/2/2012	NE	31.14	NA	NA	NA	412.86		0.0	*
4Q12		10/2/2012	NE	32.62	NA	NA	NA	411.38		0.0	
1Q13		1/2/2013	NE	33.96	NA	NA	NA	410.04		0.0	
2Q13		4/2/2013	NE	34.98	NA	NA	NA	409.02		0.4	
3Q13		7/2/2013	NE	33.45	NA	NA	NA	410.55		0.0	
4Q13		10/2/2013	NE	32.82	NA	NA	NA	411.18		0.0	
1Q14		2/11/2014	NE	34.47	NA	NA	NA	409.53		0.2	
2Q14		4/4/2014	NE	35.28	NA	NA	NA	408.72		0.2	
3Q14		7/3/2014	NE	34.83	NA	NA	NA	409.17		0.0	
4Q14		10/3/2014	NE	34.47	NA	NA	NA	409.53		0.1	
T-22											
1Q12	442.21	1/4/2012	NE	30.91	NA	NA	NA	411.30	410.66 - 384.96 (31.55 - 57.25)	0.0	*
2Q12		4/3/2012	NE	32.34	NA	NA	NA	409.87		0.0	
3Q12		7/2/2012	NE	32.81	NA	NA	NA	409.40		0.0	
4Q12		10/2/2012	NE	34.45	NA	NA	NA	407.76		0.0	
1Q13		1/2/2013	NE	35.62	NA	NA	NA	406.59		0.0	
2Q13		4/2/2013	NE	36.44	NA	NA	NA	405.77		0.1	
3Q13		7/2/2013	NE	34.04	NA	NA	NA	408.17		0.0	
4Q13		10/2/2013	NE	33.85	NA	NA	NA	408.36		0.0	
1Q14		2/11/2014	NE	35.93	NA	NA	NA	406.28		0.7	
2Q14		4/4/2014	NE	36.61	NA	NA	NA	405.60		0.2	
3Q14		7/3/2014	NE	35.96	NA	NA	NA	406.25		0.0	
4Q14		10/3/2014	NE	35.19	NA	NA	NA	407.02		0.1	
T-23											
1Q12	432.64	1/3/2012	NE	23.75	NA	NA	NA	408.89	405.41 - 379.41 (27.23 - 53.23)	0.0	*
2Q12		4/2/2012	NE	25.10	NA	NA	NA	407.54		0.0	*
3Q12		7/2/2012	NE	25.60	NA	NA	NA	407.04		0.0	*
4Q12		10/2/2012	NE	27.37	NA	NA	NA	405.27		0.0	
1Q13		1/3/2013	NE	28.35	NA	NA	NA	404.29		0.0	
2Q13		4/2/2013	NE	29.04	NA	NA	NA	403.60		0.2	
3Q13		7/2/2013	NE	26.95	NA	NA	NA	405.69		0.0	*
4Q13		10/2/2013	NE	26.40	NA	NA	NA	406.24		0.0	*
1Q14		2/10/2014	NE	28.80	NA	NA	NA	403.84		0.1	
2Q14		4/4/2014	NE	29.45	NA	NA	NA	403.19		0.0	
3Q14		7/2/2014	NE	28.37	NA	NA	NA	404.27		0.8	
4Q14		10/2/2014	NE	27.29	NA	NA	NA	405.35		0.0	
T-24											
1Q12	443.72	1/3/2012	NE	38.36	NA	NA	NA	405.36	402.22 - 376.57 (41.50 - 67.15)	NA	*
2Q12		4/3/2012	NE	40.56	NA	NA	NA	403.16		0.0	*
3Q12		7/3/2012	NE	40.45	NA	NA	NA	403.27		0.0	*
4Q12		10/1/2012	42.02	44.87	398.85	401.70	2.85	401.13		5.8	
1Q13		1/4/2013	NE	43.20	NA	NA	NA	400.52		4.3	
2Q13		4/2/2013	44.58	44.64	399.08	399.14	0.06	399.13		0.0	
3Q13		7/2/2013	42.16	42.55	401.17	401.56	0.39	401.48		10.0	
4Q13		10/2/2013	42.20	42.22	401.50	401.52	0.02	401.51		0.8	
1Q14		2/12/2014	43.35	45.60	398.12	400.37	2.25	399.92		8.2	
2Q14		4/4/2014	44.95	45.44	398.28	398.77	0.49	398.67		0.4	
3Q14		7/2/2014	44.09	44.26	399.46	399.63	0.17	399.59		0.0	
4Q14		10/3/2014	43.12	44.01	399.71	400.60	0.89	400.42		1.6	
T-28											
1Q12	444.22	1/3/2012	NE	36.98	NA	NA	NA	407.24	Unknown	NA	
2Q12		4/2/2012	NE	38.68	NA	NA	NA	405.54		0.0	
3Q12		7/2/2012	NE	39.28	NA	NA	NA	404.94		0.0	
4Q12		10/1/2012	NE	40.88	NA	NA	NA	403.34		0.0	
1Q13		1/3/2013	NE	42.56	NA	NA	NA	401.66		0.0	
2Q13		4/2/2013	NE	43.42	NA	NA	NA	400.80		0.0	
3Q13		7/3/2013	NE	42.40	NA	NA	NA	401.82		0.0	
4Q13		10/1/2013	NE	39.17	NA	NA	NA	405.05		2.1	
1Q14		2/11/2014	NE	43.72	NA	NA	NA	400.50		0.8	
2Q14		4/1/2014	NE	44.84	NA	NA	NA	399.38		0.0	
3Q14		7/1/2014	NE	44.05	NA	NA	NA	400.17		0.0	
4Q14		10/1/2014	NE	43.60	NA	NA	NA	400.62		0.0	
T-37											
1Q12	447.15	1/3/2012	NE	37.95	NA	NA	NA	409.20	398.30 - 378.30 (48.86 - 68.86)	NA	*
2Q12		4/2/2012	NE	39.12	NA	NA	NA	408.03		0.0	*
3Q12		7/2/2012	NE	39.91	NA	NA	NA	407.24		0.0	*
4Q12		10/1/2012	NE	41.44	NA	NA	NA	405.71		0.0	*
1Q13		1/3/2013	NE	43.07	NA	NA	NA	404.08		0.0	*
2Q13		4/1/2013	NE	43.79	NA	NA	NA	403.36		0.0	*
3Q13		7/3/2013	NE	42.66	NA	NA	NA	404.49		0.0	*
4Q13		10/1/2013	NE	42.51	NA	NA	NA	404.64		0.1	*
1Q14		2/12/2014	NE	44.08	NA	NA	NA	403.07		4.1	*
2Q14		4/1/2014	NE	44.91	NA	NA	NA	402.24		0.0	*
3Q14		7/1/2014	NE	44.44	NA	NA	NA	402.71		0.0	*
4Q14		10/2/2014	NE	44.03	NA	NA	NA	403.12		17.4	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
T-38											
1Q12	445.62	1/3/2012	NE	35.40	NA	NA	NA	410.22	396.48 - 376.48 (49.14 - 69.14)	NA	*
2Q12		4/2/2012	NE	36.25	NA	NA	NA	409.37		0.0	*
3Q12		7/3/2012	NE	37.00	NA	NA	NA	408.62		0.0	*
4Q12		10/1/2012	NE	38.61	NA	NA	NA	407.01		0.0	*
1Q13		1/3/2013	NE	40.06	NA	NA	NA	405.56		0.0	*
2Q13		4/1/2013	NM	NM	NA	NA	NA	NA		NM	Unsafe condition
3Q13		7/3/2013	NM	NM	NA	NA	NA	NA		NM	Unsafe condition
4Q13		10/1/2013	NM	NM	NA	NA	NA	NA		NM	Unsafe condition
1Q14		2/12/2014	NE	41.21	NA	NA	NA	404.41		0.3	*
2Q14		4/3/2014	NE	41.38	NA	NA	NA	404.24		0.0	*
3Q14		7/1/2014	NE	41.39	NA	NA	NA	404.23		0.0	*
4Q14		10/2/2014	NE	40.96	NA	NA	NA	404.66		0.0	*
T-62											
1Q12	431.73	1/3/2012	NE	25.62	NA	NA	NA	406.11	412.02 - 382.02 (19.71 - 49.71)	0.0	
2Q12		4/2/2012	NE	27.08	NA	NA	NA	404.65		0.0	
3Q12		7/3/2012	NE	27.20	NA	NA	NA	404.53		0.0	
4Q12		10/2/2012	NE	29.28	NA	NA	NA	402.45		0.0	
1Q13		1/7/2013	NE	30.39	NA	NA	NA	401.34		0.0	
2Q13		4/2/2013	NE	30.80	NA	NA	NA	400.93		0.0	
3Q13		7/2/2013	NE	26.91	NA	NA	NA	404.82		0.0	
4Q13		10/2/2013	NE	27.81	NA	NA	NA	403.92		0.0	
1Q14		2/11/2014	NE	30.81	NA	NA	NA	400.92		31.0	
2Q14		4/7/2014	NE	31.37	NA	NA	NA	400.36		0.0	
3Q14		7/2/2014	NM	NM	NA	NA	NA	NA		NM	
4Q14		10/3/2014	NE	28.62	NA	NA	NA	403.11		0.1	
T-63											
1Q12	431.24	1/3/2012	NE	25.60	NA	NA	NA	405.64	411.26 - 381.26 (19.98 - 49.98)	0.0	
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/3/2012	NE	27.08	NA	NA	NA	404.16		0.0	
4Q12		10/2/2012	NE	29.19	NA	NA	NA	402.05		0.0	
1Q13		1/7/2013	NE	30.45	NA	NA	NA	400.79		0.0	
2Q13		4/2/2013	NE	30.61	NA	NA	NA	400.63		0.0	
3Q13		7/2/2013	NE	25.92	NA	NA	NA	405.32		0.0	
4Q13		10/2/2013	NE	27.63	NA	NA	NA	403.61		0.0	
1Q14		2/11/2014	NE	30.74	NA	NA	NA	400.50		0.5	
2Q14		4/7/2014	NE	30.80	NA	NA	NA	400.44		0.1	
3Q14		7/2/2014	NE	29.21	NA	NA	NA	402.03		1.0	
4Q14		10/3/2014	NE	28.11	NA	NA	NA	403.13		0.0	
T-64											
1Q12	428.80	1/3/2012	NE	23.86	NA	NA	NA	404.94	408.99 - 378.99 (19.81 - 49.81)	0.0	
2Q12		4/2/2012	NE	25.10	NA	NA	NA	403.70		0.0	
3Q12		7/3/2012	NE	25.24	NA	NA	NA	403.56		0.0	
4Q12		10/2/2012	NE	27.44	NA	NA	NA	401.36		0.0	
1Q13		1/7/2013	NE	28.89	NA	NA	NA	399.91		0.0	
2Q13		4/2/2013	NE	28.63	NA	NA	NA	400.17		0.1	
3Q13		7/2/2013	NE	23.15	NA	NA	NA	405.65		0.2	
4Q13		10/2/2013	NE	25.86	NA	NA	NA	402.94		0.0	
1Q14		2/11/2014	NE	29.03	NA	NA	NA	399.77		0.4	
2Q14		4/4/2014	NE	29.29	NA	NA	NA	399.51		0.0	
3Q14		7/2/2014	NE	26.90	NA	NA	NA	401.90		0.8	
4Q14		10/3/2014	NE	25.81	NA	NA	NA	402.99		0.0	
PZ-1-85											
1Q12	445.50	1/3/2012	NE	39.80	NA	NA	NA	405.70	369.70 - 359.70 (75.80 - 85.80)	0.0	*
2Q12		4/4/2012	NE	41.05	NA	NA	NA	404.45		0.0	*
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		NM	
4Q12		10/1/2012	NE	43.06	NA	NA	NA	402.44		0.0	*
1Q13		1/3/2013	NE	44.35	NA	NA	NA	401.15		0.0	*
2Q13		4/1/2013	NE	45.12	NA	NA	NA	400.38		0.6	*
3Q13		7/1/2013	NE	42.68	NA	NA	NA	402.82		0.0	*
4Q13		10/1/2013	NE	42.63	NA	NA	NA	402.87		1.5	*
1Q14		2/10/2014	NE	44.82	NA	NA	NA	400.68		1.9	*
2Q14		4/1/2014	NE	45.30	NA	NA	NA	400.20		3.3	*
3Q14		7/1/2014	NE	44.82	NA	NA	NA	400.68		4.4	*
4Q14	445.48	10/1/2014	NE	43.88	NA	NA	NA	401.60	369.70 - 359.70 (75.78 - 85.78)	0.1	*
PZ-1-101											
1Q12	445.52	1/3/2012	NE	39.73	NA	NA	NA	405.79	354.52 - 344.52 (91.00 - 101.00)	0.0	*
2Q12		4/4/2012	NE	41.14	NA	NA	NA	404.38		0.0	*
3Q12		7/2/2012	NE	41.28	NA	NA	NA	404.24		0.0	*
4Q12		10/1/2012	NE	42.95	NA	NA	NA	402.57		0.0	*
1Q13		1/3/2013	NE	44.21	NA	NA	NA	401.31		0.0	*
2Q13		4/1/2013	NE	45.04	NA	NA	NA	400.48		0.1	*
3Q13		7/1/2013	NE	42.50	NA	NA	NA	403.02		0.0	*
4Q13		10/1/2013	NE	42.50	NA	NA	NA	403.02		0.6	*
1Q14		2/10/2014	NE	44.69	NA	NA	NA	400.83		0.4	*
2Q14		4/1/2014	NE	45.17	NA	NA	NA	400.35		0.0	*
3Q14		7/1/2014	NE	44.69	NA	NA	NA	400.83		3.6	*
4Q14	445.49	10/1/2014	NE	43.74	NA	NA	NA	401.75	354.52 - 344.52 (90.97 - 100.97)	0.1	*

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TABLE 1a
CUMULATIVE QUARTERLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & QUARTER	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
PZ-2-70.5											
1Q12	443.15	1/3/2012	NE	38.14	NA	NA	NA	405.01	382.65 - 372.65 (60.50 - 70.50)	0.0	*
2Q12		4/4/2012	NE	39.43	NA	NA	NA	403.72		0.0	*
3Q12		7/2/2012	NE	39.57	NA	NA	NA	403.58		0.0	*
4Q12		10/1/2012	NE	41.32	NA	NA	NA	401.83		0.0	*
1Q13		1/3/2013	NE	42.40	NA	NA	NA	400.75		0.0	*
2Q13		4/1/2013	NE	43.03	NA	NA	NA	400.12		8.4	*
3Q13		7/1/2013	NE	40.13	NA	NA	NA	403.02		0.0	*
4Q13		10/1/2013	NE	40.22	NA	NA	NA	402.93		212.2	*
1Q14		2/10/2014	NE	43.11	NA	NA	NA	400.04		12.5	*
2Q14		4/2/2014	NE	43.53	NA	NA	NA	399.62		44.6	*
3Q14		7/1/2014	NE	42.58	NA	NA	NA	400.57		1.1	*
4Q14	443.06	10/1/2014	NE	41.50	NA	NA	NA	401.56	382.65 - 372.65 (60.41 - 70.41)	143.5	*
PZ-2-84											
1Q12	443.12	1/3/2012	NE	38.05	NA	NA	NA	405.07	371.12 - 359.12 (72.00 - 84.00)	0.0	*
2Q12		4/4/2012	NE	39.37	NA	NA	NA	403.75		0.0	*
3Q12		7/2/2012	NE	39.48	NA	NA	NA	403.64		0.0	*
4Q12		10/1/2012	NE	41.21	NA	NA	NA	401.91		0.0	*
1Q13		1/3/2013	NE	42.32	NA	NA	NA	400.80		0.0	*
2Q13		4/1/2013	NE	42.95	NA	NA	NA	400.17		0.0	*
3Q13		7/1/2013	NE	40.03	NA	NA	NA	403.09		0.4	*
4Q13		10/1/2013	NE	40.55	NA	NA	NA	402.57		0.0	*
1Q14		2/10/2014	NE	43.02	NA	NA	NA	400.10		0.5	*
2Q14		4/2/2014	NE	43.47	NA	NA	NA	399.65		0.0	*
3Q14		7/1/2014	NE	42.45	NA	NA	NA	400.67		1.2	*
4Q14	443.00	10/1/2014	NE	41.39	NA	NA	NA	401.61	371.12 - 359.12 (71.88 - 83.88)	0.0	*

NOTES:
1) Elevations presented in this table are relative to the 1988 USGS datum.
2) The Corrected W.L. Elevations presented in this table were corrected by a specific gravity of 0.80 for the wells in which LNAPL was identified.
3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detector.
4) NA = Not Applicable; NE = Not Encountered; NM = Not Measured
5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.
6) Table includes comprehensive groundwater monitoring well gauging data from the combined Village of Roxana Interim Groundwater Monitoring Program and the WRB Refining LP Wood River Refinery Program.

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TABLE 1b
4Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-01											
Monthly	442.65	11/3/2014	NE	40.97	NA	NA	NA	401.68	393.85 - 383.85 (48.80 - 58.80)	8.8	*
		12/3/2014	NE	42.11	NA	NA	NA	400.54		3.1	*
MW-02											
Monthly	443.77	11/3/2014	NE	42.29	NA	NA	NA	401.48	393.90 - 383.90 (49.87 - 59.87)	140.7	*
		12/3/2014	NE	43.61	NA	NA	NA	400.16		115.5	*
MW-03											
Monthly	430.08	11/3/2014	NE	27.85	NA	NA	NA	402.23	395.41 - 385.41 (34.67 - 44.67)	1.0	*
		12/3/2014	NE	28.92	NA	NA	NA	401.16		3.4	*
MW-04											
Monthly	441.14	11/3/2014	NE	39.20	NA	NA	NA	401.94	395.08 - 385.08 (46.06 - 56.06)	72.0	*
		12/3/2014	NE	40.44	NA	NA	NA	400.70		195.8	*
MW-05											
Monthly	429.80	11/3/2014	NE	27.45	NA	NA	NA	402.35	395.83 - 385.83 (33.97 - 43.97)	0.0	*
		12/3/2014	NE	28.64	NA	NA	NA	401.16		0.8	*
MW-06A											
Monthly	432.14	11/3/2014	NE	29.43	NA	NA	NA	402.71	397.31 - 387.31 (34.83 - 44.83)	0.0	*
		12/3/2014	NE	30.78	NA	NA	NA	401.36		1.3	*
MW-06B											
Monthly	432.29	11/3/2014	NE	29.47	NA	NA	NA	402.82	368.24 - 363.24 (64.05 - 69.05)	0.0	*
		12/3/2014	NE	30.84	NA	NA	NA	401.45		8.0	*
MW-06C											
Monthly	432.11	11/3/2014	NE	29.26	NA	NA	NA	402.85	347.16 - 342.16 (84.95 - 89.95)	0.0	*
		12/3/2014	NE	30.62	NA	NA	NA	401.49		6.4	*
MW-06D											
Monthly	431.99	11/3/2014	NE	29.12	NA	NA	NA	402.87	327.27 - 322.27 (104.72 - 109.72)	0.0	*
		12/3/2014	NE	30.48	NA	NA	NA	401.51		0.0	*
MW-07											
Monthly	443.10	11/3/2014	NE	41.06	NA	NA	NA	402.04	400.18 - 390.18 (42.92 - 52.92)	4999.9	*
		12/3/2014	NE	42.61	NA	NA	NA	400.49		1197.0	*
MW-08											
Monthly	434.11	11/3/2014	NE	31.93	NA	NA	NA	402.18	400.51 - 390.51 (33.60 - 43.60)	220.8	*
		12/3/2014	NE	33.25	NA	NA	NA	400.86		95.6	*
MW-09											
Monthly	445.20	11/3/2014	NE	43.34	NA	NA	NA	401.86	398.75 - 388.75 (46.45 - 56.45)	0.1	*
		12/3/2014	NE	43.93	NA	NA	NA	401.27		0.0	*
MW-10											
Monthly	445.03	11/3/2014	NE	43.45	NA	NA	NA	401.58	400.60 - 390.60 (44.43 - 54.43)	0.0	*
		12/3/2014	NE	44.03	NA	NA	NA	401.00		0.0	*
MW-11											
Monthly	442.33	11/3/2014	NE	40.47	NA	NA	NA	401.86	400.67 - 390.67 (41.66 - 51.66)	0.4	*
		12/3/2014	NE	41.46	NA	NA	NA	400.87		0.2	*
MW-12											
Monthly	442.60	11/3/2014	NE	40.87	NA	NA	NA	401.73	400.68 - 390.68 (41.92 - 51.92)	0.0	*
		12/3/2014	NE	41.72	NA	NA	NA	400.88		6.1	*
MW-14											
Monthly	434.44	11/3/2014	NE	31.57	NA	NA	NA	402.87	401.02 - 391.02 (33.42 - 43.42)	48.0	*
		12/2/2014	NE	32.85	NA	NA	NA	401.59		50.2	*
MW-16											
Monthly	443.39	11/3/2014	NE	42.27	NA	NA	NA	401.12	406.33 - 396.33 (37.06 - 47.06)	0.0	
		12/3/2014	NE	43.15	NA	NA	NA	400.24		0.7	
MW-17											
Monthly	441.57	11/3/2014	NE	41.05	NA	NA	NA	400.52	407.28 - 392.28 (34.29 - 49.29)	9.1	
		12/3/2014	NE	41.78	NA	NA	NA	399.79		0.0	
MW-18											
Monthly	442.04	11/3/2014	NE	41.65	NA	NA	NA	400.39	407.12 - 392.12 (34.92 - 49.92)	13.0	
		12/3/2014	NE	42.44	NA	NA	NA	399.60		0.0	
MW-19											
Weekly	442.77	10/6/2014	NE	42.12	NA	NA	NA	400.65	406.43 - 391.43 (36.34 - 51.34)	0.9	
		10/14/2014	NE	42.00	NA	NA	NA	400.77		NM	
		10/20/2014	NE	42.08	NA	NA	NA	400.69		0.2	
		10/27/2014	NE	41.97	NA	NA	NA	400.80		0.0	
Monthly		11/3/2014	NE	42.01	NA	NA	NA	400.76		0.0	
Weekly		11/12/2014	NE	42.29	NA	NA	NA	400.48		0.5	
		11/17/2014	NE	42.33	NA	NA	NA	400.44		0.0	
		11/25/2014	NE	42.55	NA	NA	NA	400.22		0.0	
Monthly		12/3/2014	NE	42.90	NA	NA	NA	399.87		0.7	
Weekly		12/8/2014	NE	42.71	NA	NA	NA	400.06		0.4	
		12/15/2014	NE	42.67	NA	NA	NA	400.10		0.3	
		12/22/2014	NE	42.65	NA	NA	NA	400.12		0.0	
		12/29/2014	NE	43.01	NA	NA	NA	399.76		0.5	
MW-20											
Monthly	443.67	11/3/2014	NE	42.60	NA	NA	NA	401.07	407.79 - 392.79 (35.88 - 50.88)	0.0	
		12/3/2014	NE	43.67	NA	NA	NA	400.00		0.8	
MW-21											
Monthly	443.81	11/3/2014	NE	42.10	NA	NA	NA	401.71	408.8 - 393.8 (35.01 - 50.01)	1.8	
		12/3/2014	NE	43.62	NA	NA	NA	400.19		37.8	

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TABLE 1b
4Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
MW-22											
Weekly	442.16	10/6/2014	NE	41.24	NA	NA	NA	400.92	404.28 - 394.28 (37.88 - 47.88)	0.3	
		10/14/2014	NE	41.18	NA	NA	NA	400.98		NM	
		10/20/2014	NE	41.21	NA	NA	NA	400.95		0.5	
		10/27/2014	NE	41.11	NA	NA	NA	401.05		0.2	
Monthly		11/3/2014	NE	41.13	NA	NA	NA	401.03		6.5	
Weekly		11/12/2014	NE	41.36	NA	NA	NA	400.80		0.0	
		11/17/2014	NE	41.40	NA	NA	NA	400.76		0.0	
		11/25/2014	NE	41.55	NA	NA	NA	400.61		0.3	
Monthly		12/3/2014	NE	41.87	NA	NA	NA	400.29		0.0	
Weekly		12/8/2014	NE	41.65	NA	NA	NA	400.51		0.1	
		12/15/2014	NE	41.66	NA	NA	NA	400.50		5.6	
		12/22/2014	NE	41.67	NA	NA	NA	400.49		1.7	
		12/29/2014	NE	NM	NA	NA	NA	NA		NM	
MW-24											
Monthly	443.42	11/3/2014	NE	41.98	NA	NA	NA	401.44	404.53 - 394.53 (38.89 - 48.89)	0.4	
		12/3/2014	NE	42.65	NA	NA	NA	400.77		2.1	
MW-25											
Monthly	438.35	11/3/2014	NE	36.25	NA	NA	NA	402.10	402.76 - 392.76 (35.59 - 45.59)	1.2	
		12/3/2014	NE	37.54	NA	NA	NA	400.81		3.4	
MW-26											
Monthly	441.02	11/3/2014	NE	39.22	NA	NA	NA	401.80	402.87 - 392.87 (38.15 - 48.15)	0.0	
		12/3/2014	NE	40.44	NA	NA	NA	400.58		37.9	
MW-27											
Monthly	443.40	11/3/2014	NE	41.48	NA	NA	NA	401.92	403.61 - 393.61 (39.79 - 49.79)	20.7	
		12/3/2014	NE	41.66	NA	NA	NA	401.74		1.0	
MW-28											
Monthly	443.34	11/3/2014	NE	40.93	NA	NA	NA	402.41	409.73 - 399.73 (33.61 - 43.61)	12.6	
		12/3/2014	NE	40.98	NA	NA	NA	402.36		1.9	
P-54											
Monthly	442.18	11/3/2014	NE	40.65	NA	NA	NA	401.53	404.18 - 379.18 (38.00 - 63.00)	0.1	
		12/3/2014	NE	41.31	NA	NA	NA	400.87		0.9	
P-55											
Weekly	443.78	10/6/2014	42.61	42.81	400.97	401.17	0.20	401.13	403.35 - 393.35 (40.43 - 50.43)	162.9	
		10/14/2014	42.57	42.75	401.03	401.21	0.18	401.17		142.2	
		10/20/2014	42.64	42.89	400.89	401.14	0.25	401.09		132.1	
		10/28/2014	42.72	42.93	400.85	401.06	0.21	401.02		132.9	
Monthly		11/3/2014	42.58	42.82	400.96	401.20	0.24	401.15		56.3	
Weekly		11/12/2014	42.75	43.17	400.61	401.03	0.42	400.95		280.9	
		11/17/2014	42.70	42.90	400.88	401.08	0.20	401.04		97.8	
		11/25/2014	43.02	43.25	400.53	400.76	0.23	400.71		114.9	
Monthly		12/2/2014	42.94	43.14	400.64	400.84	0.20	400.80		128.0	
Weekly		12/8/2014	42.93	43.11	400.67	400.85	0.18	400.81		530.5	
		12/15/2014	42.91	43.09	400.69	400.87	0.18	400.83		397.0	
		12/22/2014	42.87	43.00	400.78	400.91	0.13	400.88		347.8	
		12/29/2014	44.31	44.41	399.37	399.47	0.10	399.45		307.9	
P-56											
Monthly	446.02	11/3/2014	NE	45.11	NA	NA	NA	400.91	405.20 - 380.20 (40.82 - 65.82)	0.6	
		12/2/2014	NE	46.05	NA	NA	NA	399.97		0.0	
P-57											
Monthly	446.53	11/3/2014	NE	44.92	NA	NA	NA	401.61	406.07 - 381.07 (40.46 - 65.46)	0.2	
		12/2/2014	NE	46.24	NA	NA	NA	400.29		0.0	
P-58											
Monthly	444.92	11/3/2014	NE	42.84	NA	NA	NA	402.08	404.70 - 379.70 (40.21 - 65.21)	0.7	
		12/2/2014	NE	44.51	NA	NA	NA	400.41		0.0	
P-59											
Monthly	446.78	11/3/2014	NE	46.31	NA	NA	NA	400.47	398.87 - 373.87 (47.91 - 72.91)	340.6	*
		12/2/2014	NE	46.99	NA	NA	NA	399.79		298.0	*
P-60											
Weekly	446.57	10/6/2014	NE	45.92	NA	NA	NA	400.65	403.12 - 383.12 (43.45 - 63.45)	101.0	
		10/14/2014	45.88	45.90	400.67	400.69	0.02	400.69		132.4	
		10/20/2014	46.01	46.09	400.48	400.56	0.08	400.55		123.0	
		10/28/2014	46.05	46.13	400.44	400.52	0.08	400.51		14.2	
Monthly		11/3/2014	45.93	46.02	400.55	400.64	0.09	400.63		45.2	
Weekly		11/12/2014	46.18	46.25	400.32	400.39	0.07	400.38		74.5	
		11/17/2014	46.03	46.12	400.45	400.54	0.09	400.52		30.0	
		11/25/2014	46.41	46.49	400.08	400.16	0.08	400.15		16.9	
Monthly		12/2/2014	46.38	46.46	400.11	400.19	0.08	400.18		32.9	
Weekly		12/8/2014	46.30	46.39	400.18	400.27	0.09	400.26		272.3	
		12/15/2014	46.25	46.34	400.23	400.32	0.09	400.31		6.8	
		12/22/2014	46.25	46.34	400.23	400.32	0.09	400.31		115.8	
		12/29/2014	46.70	46.78	399.79	399.87	0.08	399.86		49.3	
P-60-11											
Monthly	446.18	11/3/2014	NE	44.51	NA	NA	NA	401.67	413.03 - 383.03 (33.15 - 63.15)	0.0	
		12/2/2014	NE	44.71	NA	NA	NA	401.47		0.0	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 1b
4Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
P-60-12											
Monthly	443.31	11/3/2014	NE	42.73	NA	NA	NA	400.58	383.31 - 373.31 (60.00 - 70.00)	59.3	*
		12/2/2014	NE	43.18	NA	NA	NA	400.13		219.0	*
P-60-12S (PERCHED)											
Monthly	443.33	11/3/2014	NE	18.72	NA	NA	NA	424.61	429.49 - 419.49 (13.84 - 23.84)	0.3	
		12/2/2014	NE	19.79	NA	NA	NA	423.54		1.7	
P-60-13											
Monthly	442.43	11/3/2014	NE	40.50	NA	NA	NA	401.93	402.43 - 382.43 (40.00 - 60.00)	3.2	
		12/2/2014	NE	40.51	NA	NA	NA	401.92		1.0	
P-60-13S (PERCHED)											
Monthly	442.39	11/3/2014	NE	17.61	NA	NA	NA	424.78	432.39 - 422.39 (10.00 - 20.00)	0.0	
		12/2/2014	NE	17.70	NA	NA	NA	424.69		0.0	
P-60-S											
Monthly	446.98	11/3/2014	NE	45.19	NA	NA	NA	401.79	410.50 - 395.50 (36.48 - 51.48)	0.1	
		12/2/2014	45.21	45.59	401.39	401.77	0.38	401.69		0.8	
Weekly		12/8/2014	45.20	45.69	401.29	401.78	0.49	401.68		0.9	
		12/15/2014	45.10	45.75	401.23	401.88	0.65	401.75		0.0	
		12/22/2014	45.07	45.73	401.25	401.91	0.66	401.78		0.0	
		12/29/2014	45.55	46.28	400.70	401.43	0.73	401.28		0.4	
P-66											
Monthly	436.70	11/3/2014	NE	34.42	NA	NA	NA	402.28	401.98 - 376.98 (34.72 - 59.72)	0.2	*
		12/2/2014	NE	38.96	NA	NA	NA	397.74		0.6	
P-68											
Weekly	445.07	10/7/2014	44.39	44.44	400.63	400.68	0.05	400.67	399.81 - 374.81 (45.26 - 70.26)	324.8	*
		10/14/2014	44.35	44.42	400.65	400.72	0.07	400.71		253.8	*
		10/20/2014	44.57	44.61	400.46	400.50	0.04	400.49		291.2	*
		10/28/2014	44.57	44.62	400.45	400.50	0.05	400.49		220.4	*
Monthly		11/3/2014	NE	44.48	NA	NA	NA	400.59		204.9	*
Weekly		11/12/2014	44.71	44.78	400.29	400.36	0.07	400.35		344.6	*
		11/17/2014	44.55	44.63	400.44	400.52	0.08	400.51		298.2	*
		11/25/2014	44.95	45.03	400.04	400.12	0.08	400.10		371.0	*
Monthly		12/2/2014	44.85	44.93	400.14	400.22	0.08	400.20		388.0	*
Weekly		12/8/2014	44.81	44.90	400.17	400.26	0.09	400.24		540.8	*
		12/15/2014	44.68	44.77	400.30	400.39	0.09	400.37		384.4	*
		12/22/2014	44.73	44.82	400.25	400.34	0.09	400.32		362.0	*
		12/29/2014	45.17	45.30	399.77	399.90	0.13	399.87		276.4	*
P-74											
Monthly	442.63	11/3/2014	NE	42.33	NA	NA	NA	400.30	398.20 - 373.20 (44.43 - 69.43)	0.1	*
		12/2/2014	NE	43.04	NA	NA	NA	399.59		1.4	*
P-93A											
Monthly	446.58	11/3/2014	NE	44.82	NA	NA	NA	401.76	398.41 - 383.41 (48.17 - 63.17)	0.5	*
		12/2/2014	NE	46.28	NA	NA	NA	400.30		1.3	*
P-93B											
Monthly	446.46	11/3/2014	NE	44.86	NA	NA	NA	401.60	371.86 - 369.86 (74.60 - 76.60)	0.3	*
		12/2/2014	NE	46.31	NA	NA	NA	400.15		27.4	*
P-93C											
Monthly	446.51	11/3/2014	NE	44.75	NA	NA	NA	401.76	352.26 - 350.26 (94.26 - 96.26)	0.1	*
		12/2/2014	NE	46.21	NA	NA	NA	400.30		0.9	*
P-93D											
Monthly	446.89	11/3/2014	NE	44.90	NA	NA	NA	401.99	321.14 - 319.14 (125.75 - 127.75)	5.5	*
		12/2/2014	NE	46.34	NA	NA	NA	400.55		92.2	*
GP-9-PZ											
Monthly	442.41	11/3/2014	NE	41.67	NA	NA	NA	400.74	404.81 - 394.81 (37.60 - 47.60)	0.0	
		12/2/2014	NE	42.49	NA	NA	NA	399.92		0.0	
ROST-3-MW											
Weekly	442.29	10/6/2014	NE	41.15	NA	NA	NA	401.14	404.48 - 394.48 (37.81 - 47.81)	0.5	
		10/14/2014	NE	41.08	NA	NA	NA	401.21		0.0	
		10/20/2014	NE	41.10	NA	NA	NA	401.19		0.2	
		10/27/2014	NE	41.02	NA	NA	NA	401.27		0.2	
Monthly		11/3/2014	NE	41.00	NA	NA	NA	401.29		2.8	
Weekly		11/12/2014	NE	41.21	NA	NA	NA	401.08		0.1	
		11/17/2014	NE	41.26	NA	NA	NA	401.03		0.0	
		11/25/2014	NE	41.36	NA	NA	NA	400.93		0.8	
Monthly		12/3/2014	NE	41.66	NA	NA	NA	400.63		0.6	
Weekly		12/8/2014	NE	41.47	NA	NA	NA	400.82		108.4	
		12/15/2014	NE	41.45	NA	NA	NA	400.84		115.8	
		12/22/2014	NE	41.47	NA	NA	NA	400.82		350.0	
		12/29/2014	NE	42.80	NA	NA	NA	399.49		1.8	

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TABLE 1b
4Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ											
Weekly	442.13	10/6/2014	NE	40.21	NA	NA	NA	401.92	407.20 - 397.20 (34.93 - 44.93)	0.4	
		10/14/2014	NE	40.14	NA	NA	NA	401.99		4.6	
		10/20/2014	NE	40.18	NA	NA	NA	401.95		38.4	
		10/27/2014	NM	40.10	NA	NA	NA	402.03		1.9	
Monthly		11/3/2014	NE	40.07	NA	NA	NA	402.06		8.0	
Weekly		11/12/2014	NE	41.24	NA	NA	NA	400.89		0.9	
		11/17/2014	NE	40.24	NA	NA	NA	401.89		0.3	
		11/25/2014	NE	40.29	NA	NA	NA	401.84		0.9	
Monthly		12/3/2014	NE	40.41	NA	NA	NA	401.72		1.0	
Weekly		12/8/2014	NE	40.23	NA	NA	NA	401.90		6.6	
		12/15/2014	NE	40.20	NA	NA	NA	401.93		0.6	
		12/22/2014	NE	40.25	NA	NA	NA	401.88		6.3	
		12/29/2014	NE	40.66	NA	NA	NA	401.47		0.3	
ROST-4-PZ(A)											
Weekly	442.11	10/6/2014	NE	39.79	NA	NA	NA	402.32	407.34 - 397.34 (34.77 - 44.77)	0.1	
		10/14/2014	NE	40.02	NA	NA	NA	402.09		5.4	
		10/20/2014	NE	40.10	NA	NA	NA	402.01		56.6	
		10/27/2014	NE	40.00	NA	NA	NA	402.11		0.0	
Monthly		11/3/2014	NE	39.73	NA	NA	NA	402.38		0.0	
Weekly		11/12/2014	NE	39.76	NA	NA	NA	402.35		0.0	
		11/17/2014	NE	39.82	NA	NA	NA	402.29		3.9	
		11/25/2014	NE	39.97	NA	NA	NA	402.14		0.0	
Monthly		12/3/2014	NE	40.66	NA	NA	NA	401.45		0.0	
Weekly		12/8/2014	NE	40.49	NA	NA	NA	401.62		0.0	
		12/15/2014	NE	40.47	NA	NA	NA	401.64		0.0	
		12/22/2014	NE	46.51	NA	NA	NA	395.60		0.2	
		12/29/2014	NE	40.98	NA	NA	NA	401.13		0.3	
ROST-4-PZ(B)											
Weekly	442.38	10/6/2014	NE	39.99	NA	NA	NA	402.39	407.33 - 397.33 (35.05 - 45.05)	0.1	
		10/14/2014	NE	39.93	NA	NA	NA	402.45		NM	
		10/20/2014	NE	39.98	NA	NA	NA	402.40		0.4	
		10/27/2014	NE	39.90	NA	NA	NA	402.48		0.0	
Monthly		11/3/2014	NE	39.97	NA	NA	NA	402.41		0.0	
Weekly		11/12/2014	NE	40.08	NA	NA	NA	402.30		0.2	
		11/17/2014	NE	40.06	NA	NA	NA	402.32		0.0	
		11/25/2014	NE	40.13	NA	NA	NA	402.25		1.9	
Monthly		12/3/2014	NE	40.21	NA	NA	NA	402.17		0.8	
Weekly		12/8/2014	NE	40.20	NA	NA	NA	402.18		1.1	
		12/15/2014	NE	40.22	NA	NA	NA	402.16		0.0	
		12/22/2014	NE	40.27	NA	NA	NA	402.11		0.1	
		12/29/2014	NE	40.46	NA	NA	NA	401.92		0.3	
ROST-4-PZ(C)											
Weekly	442.66	10/6/2014	NE	41.26	NA	NA	NA	401.40	407.71 - 397.71 (34.95 - 44.95)	0.8	
		10/14/2014	NE	41.22	NA	NA	NA	401.44		0.0	
		10/20/2014	NE	41.23	NA	NA	NA	401.43		0.2	
		10/27/2014	NE	41.19	NA	NA	NA	401.47		0.0	
Monthly		11/3/2014	NE	41.15	NA	NA	NA	401.51		3.6	
Weekly		11/12/2014	NE	41.27	NA	NA	NA	401.39		0.0	
		11/17/2014	NE	41.29	NA	NA	NA	401.37		0.0	
		11/25/2014	NE	41.32	NA	NA	NA	401.34		0.0	
Monthly		12/3/2014	NE	41.44	NA	NA	NA	401.22		0.0	
Weekly		12/8/2014	NE	41.36	NA	NA	NA	401.30		11.1	
		12/15/2014	NE	41.37	NA	NA	NA	401.29		15.2	
		12/22/2014	NE	41.42	NA	NA	NA	401.24		110.5	
		12/29/2014	NE	41.61	NA	NA	NA	401.05		0.7	
ROST-4-PZ(D)											
Weekly	442.98	10/6/2014	NE	41.03	NA	NA	NA	401.95	408.01 - 398.01 (34.97 - 44.97)	0.1	
		10/14/2014	NE	40.98	NA	NA	NA	402.00		0.9	
		10/20/2014	NE	41.02	NA	NA	NA	401.96		14.3	
		10/27/2014	NE	40.92	NA	NA	NA	402.06		1.7	
Monthly		11/3/2014	NE	40.93	NA	NA	NA	402.05		0.1	
Weekly		11/12/2014	NE	41.07	NA	NA	NA	401.91		0.0	
		11/17/2014	NE	41.07	NA	NA	NA	401.91		0.0	
		11/25/2014	NE	41.13	NA	NA	NA	401.85		0.3	
Monthly		12/3/2014	NE	41.23	NA	NA	NA	401.75		1.6	
Weekly		12/8/2014	NE	41.12	NA	NA	NA	401.86		1.4	
		12/15/2014	NE	41.11	NA	NA	NA	401.87		4.4	
		12/22/2014	NE	41.14	NA	NA	NA	401.84		0.2	
		12/29/2014	NE	41.38	NA	NA	NA	401.60		0.4	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 1b
4Q14 WEEKLY/MONTHLY GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID & EVENT	TOP OF CASING (elev.[1])	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER-PRODUCT INTERFACE (elev.[1])	PRODUCT (elev.[1])	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL[2] (elev.[1])	SCREENED INTERVAL (elev.[1]) (ft btoc)	WELL HEAD PID[3] (ppm)	COMMENTS
ROST-4-PZ(E)											
Weekly	441.96	10/6/2014	NE	39.72	NA	NA	NA	402.24	407.21 - 397.21 (34.75 - 44.75)	0.1	
		10/14/2014	NE	39.71	NA	NA	NA	402.25		2.7	
		10/20/2014	NE	39.71	NA	NA	NA	402.25		1.0	
		10/27/2014	NM	39.71	NA	NA	NA	402.25		0.0	
Monthly		11/3/2014	NE	39.69	NA	NA	NA	402.27		0.2	
Weekly		11/12/2014	NE	39.75	NA	NA	NA	402.21		1.5	
		11/17/2014	NE	39.72	NA	NA	NA	402.24		0.0	
		11/25/2014	NE	39.75	NA	NA	NA	402.21		0.0	
Monthly		12/3/2014	NE	39.86	NA	NA	NA	402.10		0.1	
Weekly		12/8/2014	NE	39.77	NA	NA	NA	402.19		0.4	
		12/15/2014	NE	39.75	NA	NA	NA	402.21		0.0	
		12/22/2014	NE	39.77	NA	NA	NA	402.19		0.0	
		12/29/2014	NE	39.90	NA	NA	NA	402.06		0.3	
ROST-4-PZ(F)											
Weekly	442.12	10/6/2014	NE	39.79	NA	NA	NA	402.33	407.59 - 397.59 (34.53 - 44.53)	0.1	
		10/14/2014	NE	39.78	NA	NA	NA	402.34		0.0	
		10/20/2014	NE	39.78	NA	NA	NA	402.34		0.3	
		10/27/2014	NE	39.78	NA	NA	NA	402.34		0.2	
Monthly		11/3/2014	NE	39.44	NA	NA	NA	402.68		0.4	
Weekly		11/12/2014	NE	39.79	NA	NA	NA	402.33		2.5	
		11/17/2014	NE	39.79	NA	NA	NA	402.33		0.1	
		11/25/2014	NE	39.76	NA	NA	NA	402.36		0.0	
Monthly		12/3/2014	NE	39.87	NA	NA	NA	402.25		0.4	
Weekly		12/8/2014	NE	39.79	NA	NA	NA	402.33		0.0	
		12/15/2014	NE	39.80	NA	NA	NA	402.32		0.1	
		12/22/2014	NE	39.81	NA	NA	NA	402.31		0.0	
		12/29/2014	NE	39.90	NA	NA	NA	402.22		0.3	
ROST-4-PZ(G)											
Weekly	442.13	10/6/2014	NE	41.21	NA	NA	NA	400.92	407.85 - 397.85 (34.28 - 44.28)	0.1	
		10/14/2014	NE	NE	NA	NA	NA	NA		0.0	
		10/20/2014	NE	41.21	NA	NA	NA	400.92		0.8	
		10/27/2014	NE	41.09	NA	NA	NA	401.04		0.0	
Monthly		11/3/2014	NE	41.13	NA	NA	NA	401.00		0.0	
Weekly		11/12/2014	NE	41.39	NA	NA	NA	400.74		3.2	
		11/17/2014	NE	41.42	NA	NA	NA	400.71		0.0	
		11/25/2014	NE	41.55	NA	NA	NA	400.58		9.3	
Monthly		12/3/2014	NE	41.87	NA	NA	NA	400.26		0.2	
Weekly		12/8/2014	NE	41.59	NA	NA	NA	400.54		4.0	
		12/15/2014	NE	41.55	NA	NA	NA	400.58		2.4	
		12/22/2014	NE	41.55	NA	NA	NA	400.58		0.0	
		12/29/2014	NE	41.91	NA	NA	NA	400.22		0.3	
ROST-5-PZ (PERCHED)											
Monthly	442.22	11/3/2014	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	0.0	Well Dry
		12/3/2014	NE	NE	NA	NA	NA	NA		0.0	Well Dry
ROST-7-PZ (PERCHED)											
Monthly	442.19	11/3/2014	NE	21.58	NA	NA	NA	420.61	422.19 - 412.19 (20.00 - 30.00)	0.5	
		12/3/2014	NE	21.60	NA	NA	NA	420.59		0.1	
ROST-10-PZ (PERCHED)											
Monthly	444.51	11/3/2014	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	0.0	Well Dry
		12/3/2014	NE	NE	NA	NA	NA	NA		13.1	Well Dry
ROST-21-PZ (PERCHED)											
Monthly	443.72	11/3/2014	NE	19.42	NA	NA	NA	424.30	433.72 - 423.72 (10.00 - 20.00)	0.7	
		12/3/2014	NE	19.50	NA	NA	NA	424.22		2.4	
T-12											
Monthly	444.69	11/3/2014	NE	44.51	NA	NA	NA	400.18	398.23 - 372.23 (46.46 - 72.46)	0.9	*
		12/2/2014	NE	45.01	NA	NA	NA	399.68		8.8	*
PZ-1-85											
Monthly	445.48	11/3/2014	NE	43.66	NA	NA	NA	401.82	369.70 - 359.70 (75.78 - 85.78)	0.3	*
		12/3/2014	NE	44.22	NA	NA	NA	401.26		0.0	*
PZ-1-101											
Monthly	445.49	11/3/2014	NE	43.54	NA	NA	NA	401.95	354.52 - 344.52 (90.97 - 100.97)	0.0	*
		12/3/2014	NE	44.09	NA	NA	NA	401.40		0.0	*
PZ-2-70.5											
Monthly	443.06	11/3/2014	NE	41.36	NA	NA	NA	401.70	382.65 - 372.65 (60.41 - 70.41)	38.3	*
		12/3/2014	NE	42.22	NA	NA	NA	400.84		35.7	*
PZ-2-84											
Monthly	443.00	11/3/2014	NE	41.24	NA	NA	NA	401.76	371.12 - 359.12 (71.88 - 83.88)	0.0	*
		12/3/2014	NE	42.12	NA	NA	NA	400.88		0.0	*

NOTES:
1) Elevations presented in this table are relative to the 1988 USGS datum.
2) The Corrected W.L. Elevations presented in this table were corrected by a specific gravity of 0.80 for the wells in which LNAPL was identified.
3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detector.
4) NA = Not Applicable; NE = Not Encountered; NM = Not Measured
5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.

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TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-01							
1Q12	6.64	18.37	1.180	13.32	0.00	0.02	
2Q12	6.61	19.00	*	3.02	0.00	41	
3Q12	6.65	20.03	0.997	2.01	0.09	29	
4Q12	6.63	18.38	*	5.10	0.00	47	Initial Sample
	7.64	17.47	1.226	6.88	0.00	-12	Confirmation Sample
1Q13	6.73	18.14	*	8.16	0.20	-0.02	
2Q13	6.70	18.71	1.096	7.39	0.01	-117	
3Q13	6.76	19.26	1.068	28.82	0.90	-35	
4Q13	6.71	19.07	1.332	9.26	0.00	-27	
1Q14	6.77	18.29	1.203	9.97	0.00	-3	
2Q14	6.73	18.29	1.145	4.81	0.07	20	
3Q14	6.76	19.63	1.799	7.12	0.00	-59	
4Q14	6.77	18.93	1.170	8.10	0.02	-36	
MW-02							
1Q12	6.55	18.13	1.165	45.20	0.00	-1	
2Q12	6.61	19.70	*	41.55	0.00	-60	
3Q12	6.66	20.80	1.082	4.01	0.00	-26	
4Q12	6.61	18.86	*	6.41	0.00	-37	
1Q13	6.67	18.53	*	12.39	0.05	-0.11	
2Q13	6.64	20.21	1.204	7.15	0.01	-159	
3Q13	6.76	21.55	1.320	9.69	0.00	-105	
4Q13	6.72	20.79	1.279	5.91	0.00	-99	
1Q14	6.61	19.24	1.256	17.36	0.03	-107	
2Q14	6.68	20.81	1.280	16.03	0.09	-105	
3Q14	6.74	21.58	*	8.24	0.00	-99	
4Q14	6.67	20.16	1.438	5.95	0.00	-116	
MW-03							
1Q12	6.83	18.95	1.370	5.89	0.06	-0.09	
2Q12	6.72	19.61	*	2.26	0.00	-79	
3Q12	6.63	20.63	1.255	1.18	0.03	-67	
4Q12	6.80	20.10	*	1.81	0.00	-61	
1Q13	6.88	19.17	1.333	2.67	0.01	-243	
2Q13	6.92	19.83	1.078	2.64	0.02	-207	
3Q13	6.99	20.05	1.084	8.73	0.00	-143	
4Q13	6.93	19.92	1.402	9.94	0.00	-123	
1Q14	6.90	18.04	1.689	8.24	0.01	-125	
2Q14	6.85	19.35	1.267	1.91	0.64	-137	
3Q14	6.95	20.06	*	8.43	0.00	-134	
4Q14	6.92	18.95	1.352	3.87	0.00	-142	
MW-04							
1Q12	6.81	18.62	0.955	3.40	0.00	-0.08	
2Q12	6.74	20.35	*	9.39	0.00	-58	
3Q12	6.60	19.94	1.137	9.69	0.00	-82	
4Q12	6.78	19.13	*	8.68	0.00	-66	
1Q13	6.83	18.75	*	25.45	0.21	-113	Initial Sample
	7.26	18.37	1.296	6.07	0.04	-108	Confirmation Sample
2Q13	6.81	19.74	1.283	8.50	0.00	-151	
3Q13	6.76	20.36	1.481	8.03	0.00	-105	
4Q13	6.79	18.67	1.505	8.67	0.00	-103	
1Q14	6.84	17.90	1.457	9.36	0.00	-113	
2Q14	6.81	18.59	1.434	7.85	0.00	-99	
3Q14	6.85	19.57	*	8.29	0.00	-116	
4Q14	6.86	18.96	1.315	9.22	0.00	-120	

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TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-05							
1Q12	6.71	17.90	0.987	6.60	0.00	-13	
2Q12	6.68	19.74	*	4.57	0.00	-50	
3Q12	6.78	22.92	0.856	8.64	0.00	-120	
4Q12	6.79	18.67	*	8.72	0.00	-67	
1Q13	6.83	19.18	*	11.85	0.04	-124	
2Q13	6.79	19.64	1.010	8.72	0.00	-166	
3Q13	6.85	20.57	1.113	12.87	0.00	-129	
4Q13	6.86	19.97	1.115	9.55	0.00	-114	
1Q14	6.82	17.75	1.142	28.73	0.00	-119	
2Q14	6.77	20.42	1.165	8.64	0.00	-126	
3Q14	6.79	19.91	*	9.32	0.00	-118	
4Q14	6.83	19.07	1.209	18.04	0.00	-125	
MW-06A							
1Q12	6.64	17.62	1.295	6.30	0.00	-0.07	
2Q12	6.52	20.09	*	6.24	0.00	-55	
3Q12	6.56	20.14	1.098	1.46	0.00	-37	
4Q12	6.65	19.52	*	8.32	0.00	-57	
1Q13	7.00	20.21	0.690	20.50	0.02	-132	
2Q13	6.84	18.96	0.848	7.09	0.00	-255	
3Q13	6.77	20.15	0.928	9.62	0.00	-128	
4Q13	6.67	19.52	1.339	9.08	0.00	-116	
1Q14	6.72	17.88	1.418	8.64	0.00	-114	
2Q14	6.58	19.29	1.852	9.74	0.05	-128	
3Q14	6.69	19.70	*	7.30	0.00	-114	
4Q14	6.69	19.14	1.594	24.72	0.02	-123	
MW-06B							
1Q12	6.90	17.13	1.080	10.59	0.00	-0.06	
2Q12	6.80	19.60	*	3.07	0.00	-35	
3Q12	6.80	20.81	1.437	5.88	0.00	-42	
4Q12	6.89	19.49	*	7.40	0.00	-34	
1Q13	6.82	18.11	1.127	7.34	0.00	-79	
2Q13	6.80	18.21	1.557	1.11	0.04	-132	
3Q13	6.92	19.68	1.210	9.92	0.19	-85	
4Q13	6.89	18.56	1.424	7.08	0.00	-88	
1Q14	6.96	17.14	1.221	17.54	0.01	-88	
2Q14	6.93	18.42	1.203	1.60	0.14	-117	
3Q14	6.92	19.60	*	9.10	0.00	-89	
4Q14	6.93	18.62	1.235	9.83	0.09	-94	
MW-06C							
1Q12	6.93	17.04	1.127	4.02	0.00	-0.08	
2Q12	6.87	19.09	*	1.71	0.00	-68	
3Q12	6.92	20.05	1.036	2.16	0.00	-55	
4Q12	6.94	19.04	*	0.51	0.00	-63	
1Q13	6.94	17.60	0.828	6.48	0.01	-103	
2Q13	7.70	4.91	1.051	4.91	0.05	-178	
3Q13	7.03	19.24	1.050	6.30	0.10	-124	
4Q13	6.99	17.83	1.168	8.60	0.00	-122	
1Q14	7.03	17.02	1.153	6.78	0.00	-118	
2Q14	7.01	17.94	1.102	11.44	0.17	-136	
3Q14	7.08	18.97	*	4.81	0.00	-125	
4Q14	7.07	18.22	1.004	8.88	0.06	-128	
MW-06D							
1Q12	6.94	16.69	1.192	5.48	0.02	-0.08	
2Q12	6.96	19.50	*	7.17	0.00	-77	
3Q12	6.43	20.56	1.030	1.05	0.04	-41	
4Q12	7.03	19.07	*	5.16	0.00	-61	
1Q13	7.07	17.15	0.929	6.69	0.00	-116	
2Q13	8.27	18.20	1.131	7.93	0.00	-172	
3Q13	7.04	18.60	1.373	8.93	0.00	-134	
4Q13	6.98	17.47	1.611	8.40	0.00	-124	
1Q14	7.08	16.88	1.424	6.80	0.00	-127	
2Q14	7.05	17.34	1.424	8.46	0.06	-147	
3Q14	7.01	18.57	*	18.02	0.00	-135	
4Q14	7.04	17.79	1.633	9.39	0.04	-142	

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TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-07							
1Q12	6.58	15.54	1.047	3.31	0.09	86	
2Q12	6.67	20.51	*	3.58	0.00	-31	
3Q12	6.69	21.88	1.062	1.69	0.03	-69	
4Q12	6.75	18.34	*	6.24	0.17	-15	
1Q13	6.90	18.28	1.056	8.57	0.00	-91	
2Q13	6.86	19.35	1.123	3.37	0.07	-148	
3Q13	6.76	19.76	1.254	21.67	0.09	-91	
4Q13	6.78	18.89	1.442	9.42	0.05	-76	
1Q14	6.88	18.24	1.569	9.44	0.22	-151	
2Q14	6.87	18.98	1.610	8.87	0.07	-89	
3Q14	6.83	20.22	*	9.55	0.05	-93	
4Q14	6.86	19.78	1.606	9.88	0.00	-104	
MW-08							
1Q12	6.46	16.89	1.593	3.04	0.02	8	
2Q12	6.52	20.05	*	3.16	0.08	-11	
3Q12	6.46	21.97	1.299	7.27	0.00	17	Well was resampled on 08/07/12.
4Q12	6.52	17.81	*	5.83	0.12	0.00	
1Q13	6.58	17.83	0.863	9.84	0.00	-56	
2Q13	6.50	19.71	0.890	7.19	0.05	-124	
3Q13	6.57	19.86	2.092	8.65	0.07	-60	
4Q13	6.52	18.42	2.225	8.90	0.00	-46	
1Q14	6.59	18.12	1.741	8.77	0.11	-130	
2Q14	6.56	18.82	1.777	9.15	0.02	-65	
3Q14	6.72	19.81	*	8.40	0.00	-95	
4Q14	6.76	19.31	1.772	9.39	0.00	-89	
MW-09							
1Q12	6.56	17.30	1.160	7.35	0.00	-27	
2Q12	6.62	20.12	*	5.46	0.00	-15	
3Q12	6.67	19.87	1.127	8.71	0.01	-39	
4Q12	6.69	17.19	*	5.51	0.00	-10	
1Q13	6.73	17.96	1.367	25.29	0.00	-111	
2Q13	6.69	18.01	1.126	9.51	0.00	-125	
3Q13	6.75	18.84	1.213	9.52	0.13	-76	
4Q13	6.71	18.47	1.440	7.91	0.00	-91	
1Q14	6.82	17.06	1.322	0.19	0.02	-54	
2Q14	6.75	17.34	1.273	1.20	0.42	-48	
3Q14	6.75	19.67	*	7.03	0.11	-67	
4Q14	6.73	18.98	1.408	8.14	0.20	-58	
MW-10							
1Q12	6.76	18.29	0.973	28.75	0.00	-41	
2Q12	6.73	18.57	*	5.76	0.00	-63	
3Q12	6.87	21.46	0.623	2.57	0.02	-90	
4Q12	6.78	17.36	*	7.57	0.00	-20	Initial Sample
	7.61	17.42	1.222	6.93	0.00	-126	Confirmation Sample
1Q13	6.89	18.36	1.082	9.43	0.00	-173	Initial Sample
	6.88	16.98	*	8.89	0.04	-101	Confirmation Sample
2Q13	6.78	18.85	1.210	8.71	0.02	-260	
3Q13	6.90	20.11	1.360	9.57	0.02	-127	
4Q13	6.92	19.56	1.373	8.91	0.00	-129	
1Q14	6.85	17.17	1.632	9.92	0.01	-124	
2Q14	6.83	17.96	1.734	9.43	0.06	-162	
3Q14	6.89	19.54	*	7.27	0.00	-123	
4Q14	6.83	19.57	1.849	9.85	0.05	-121	

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TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-11							
1Q12	6.74	16.18	1.077	7.87	0.00	22	
2Q12	6.76	18.13	*	5.40	0.00	-68	
3Q12	6.67	21.27	1.158	1.15	0.06	-69	
4Q12	6.68	18.82	*	8.44	0.00	-41	
1Q13	6.76	17.64	1.586	1.94	0.00	-179	
2Q13	6.75	18.16	1.313	5.58	0.01	-310	
3Q13	6.78	19.55	1.336	10.06	0.08	-94	
4Q13	6.73	17.76	1.676	9.66	0.00	-98	
1Q14	6.77	16.61	1.587	9.79	0.02	-100	
2Q14	6.74	17.19	1.677	9.63	0.08	-116	
3Q14	6.78	19.16	*	7.69	0.01	-99	
4Q14	6.76	18.19	1.553	12.87	0.00	-121	
MW-12							
1Q12	6.78	17.26	1.074	8.26	0.10	146	
2Q12	6.80	18.23	1.736	4.57	0.00	38	
3Q12	6.78	20.11	0.912	2.66	0.03	4	
4Q12	6.81	19.19	*	6.47	0.00	90	
1Q13	6.79	17.34	1.006	5.83	0.06	1	
2Q13	6.86	19.24	0.958	1.01	0.09	-285	
3Q13	6.85	19.61	1.003	4.21	0.13	261	
4Q13	6.83	18.87	1.030	7.86	0.01	69	
1Q14	6.79	17.15	0.977	4.91	0.14	56	
2Q14	6.80	18.59	0.969	3.00	0.19	98	
3Q14	6.85	19.68	1.737	9.27	0.20	103	
4Q14	6.84	19.09	1.035	19.80	0.32	202	
MW-13							
1Q12	6.68	18.94	1.202	5.78	0.00	-0.06	
2Q12	6.66	20.78	*	6.11	0.00	-78	
3Q12	6.64	22.65	1.435	7.16	0.00	-96	
4Q12	6.60	20.73	*	9.02	0.04	-35	
1Q13	6.64	18.59	1.019	3.55	0.01	-178	
2Q13	6.60	19.69	1.260	2.35	0.00	-152	
3Q13	6.69	20.60	1.355	9.26	0.04	-122	
4Q13	6.54	19.63	1.527	7.87	0.00	-93	
1Q14	6.75	19.40	1.449	9.22	0.00	-107	
2Q14	6.71	20.02	1.459	3.40	0.00	-115	
3Q14	6.84	20.85	1.494	9.21	0.00	-124	
4Q14	6.72	19.48	1.491	7.92	0.00	-115	
MW-14							
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.64	20.65	*	9.70	0.00	5	
3Q12	6.61	22.82	1.058	5.78	0.00	-63	
4Q12	6.61	19.59	1.137	7.69	0.03	-129	
1Q13	6.65	18.92	0.804	8.18	0.06	-100	
2Q13	6.48	19.09	1.138	5.68	0.03	-129	
3Q13	6.73	20.30	1.076	4.75	0.24	-113	
4Q13	6.70	19.37	1.262	1.83	0.05	-109	
1Q14	6.66	16.71	1.156	3.11	0.03	-90	
2Q14	6.74	19.27	1.371	2.17	0.65	-107	
3Q14	6.80	21.27	1.093	3.92	0.06	-117	
4Q14	6.74	18.78	1.204	4.11	0.00	-107	
MW-16							
1Q13	*	19.17	0.851	7.03	0.00	-98	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.57	19.56	0.826	0.96	0.03	-288	
3Q13	6.56	21.37	0.986	9.33	0.28	-63	
4Q13	6.49	18.69	1.283	8.13	0.00	-42	
1Q14	6.55	16.61	1.579	9.95	0.05	-66	
2Q14	6.47	19.14	1.466	4.29	0.04	-95	
3Q14	6.55	20.83	*	9.79	0.00	-87	
4Q14	6.61	20.95	1.474	12.38	0.05	-99	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
MW-22							
1Q13	11.15	17.69	1.096	9.20	0.00	-111	Added to Interim GW Monitoring Program in 1Q13
2Q13	6.76	19.91	1.150	1.64	0.07	-282	
3Q13	6.74	21.40	1.101	21.29	0.01	-105	
4Q13	6.72	20.53	1.171	9.24	0.02	-107	
1Q14	6.78	19.54	1.115	7.57	0.04	-104	
2Q14	6.75	21.83	1.066	8.03	0.05	-108	
3Q14	6.77	23.02	*	7.61	0.00	-106	
4Q14	6.74	20.55	1.242	10.99	0.00	-108	
MW-24							
2Q13	6.73	18.63	1.203	3.04	0.24	-219	Added to Interim GW Monitoring Program in 2Q13
3Q13	6.75	19.12	1.169	9.18	0.34	207	
4Q13	6.75	18.59	1.371	9.32	1.62	74	
1Q14	6.75	16.98	1.338	8.15	0.08	91	
2Q14	6.69	18.35	1.264	1.63	1.34	98	
3Q14	6.79	19.63	*	7.14	1.03	132	
4Q14	6.81	19.40	1.321	7.42	1.89	146	
MW-25							
4Q14	6.73	20.05	1.786	20.33	0.00	-98	Added to Interim GW Monitoring Program in 4Q14
MW-26							
4Q14	6.81	19.62	1.023	9.02	0.63	53	Added to Interim GW Monitoring Program in 4Q14
MW-27							
4Q14	6.74	18.71	1.322	7.04	1.11	-62	Added to Interim GW Monitoring Program in 4Q14
MW-28							
4Q14	6.75	18.72	1.420	8.32	0.00	-95	Added to Interim GW Monitoring Program in 4Q14
P-54							
1Q12	6.73	16.45	1.010	5.10	0.31	61	
2Q12	6.66	18.78	*	36.80	0.22	180	
3Q12	6.72	19.02	0.973	7.77	0.00	9	
4Q12	6.72	17.62	1.167	4.76	0.17	146	
1Q13	6.75	17.50	1.061	4.97	0.11	-23	
2Q13	6.70	18.08	1.105	2.88	0.11	-96	Initial Sample
	6.73	17.51	1.035	4.36	0.63	165	Confirmation Sample
3Q13	6.80	18.42	1.091	8.66	4.22	293	
4Q13	6.80	18.09	1.475	6.74	2.46	68	
1Q14	6.74	16.08	1.147	7.53	1.40	108	
2Q14	6.69	17.89	1.065	2.80	2.28	140	
3Q14	6.81	19.11	*	1.04	2.50	117	
4Q14	6.76	18.30	1.432	4.50	2.79	173	
P-55							
1Q12	6.86	15.22	0.706	1.56	0.08	-0.07	
2Q12	6.78	19.69	*	4.55	0.00	-43	
3Q12	NM	NM	NM	NM	NM	NM	Well damaged. No sample taken.
4Q12	NM	NM	NM	NM	NM	NM	Well damaged. No sample taken.
1Q13	*	17.37	0.635	7.68	0.00	-125	Well Replaced during 4Q12
2Q13	6.86	21.33	0.799	0.06	0.02	-174	
3Q13	6.91	21.72	0.785	9.58	0.01	-133	
4Q13	6.87	21.40	0.950	3.17	0.03	-115	
1Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
2Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
3Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
4Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
P-56							
1Q12	6.53	16.08	1.012	4.68	0.04	-5	
2Q12	6.57	21.78	*	1.04	0.00	0.00	
3Q12	6.58	22.08	1.245	3.47	0.00	12	
4Q12	6.51	22.60	*	7.52	0.02	-7	
1Q13	*	20.98	1.106	4.56	0.00	-47	
2Q13	6.61	22.69	1.218	3.00	0.00	-122	
3Q13	6.70	25.57	1.395	6.56	0.02	-115	
4Q13	6.63	24.88	1.319	1.79	0.01	-91	
1Q14	6.66	21.79	1.248	1.13	0.05	-100	
2Q14	6.68	20.97	1.227	1.79	0.00	-92	
3Q14	6.66	25.62	1.260	8.34	0.04	-107	
4Q14	6.65	23.68	1.243	6.14	0.00	-110	

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TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-57							
1Q12	6.48	16.73	1.502	2.30	0.02	-73	
2Q12	6.55	19.24	*	2.28	0.00	-54	
3Q12	6.59	20.98	1.182	3.25	0.00	-5	
4Q12	6.59	18.72	*	5.19	0.00	-28	
1Q13	*	20.16	1.116	6.22	0.00	-104	
2Q13	6.53	20.78	1.331	6.97	0.00	-146	
3Q13	6.59	22.45	1.235	8.81	0.00	-109	
4Q13	6.60	21.55	1.284	4.52	0.00	-120	
1Q14	6.66	20.29	1.271	9.67	0.00	-178	
2Q14	6.61	21.26	1.309	19.65	0.04	-106	
3Q14	6.63	23.22	*	9.69	0.00	-108	
4Q14	6.62	21.75	1.414	8.91	0.00	-120	
P-58							
1Q12	6.54	16.97	1.252	14.38	0.01	-0.03	
2Q12	6.50	19.08	*	10.20	0.00	-5	
3Q12	6.56	19.51	1.199	12.67	0.00	19	
4Q12	6.49	18.76	*	8.22	0.00	11	Initial Sample
	7.45	18.15	1.259	13.60	0.01	-112	Confirmation Sample
1Q13	6.57	16.48	0.964	23.26	0.00	-67	
2Q13	6.50	18.92	1.174	23.19	0.03	-109	
3Q13	6.53	21.63	1.201	9.42	0.05	-87	
4Q13	6.52	19.70	1.430	6.70	0.02	-84	
1Q14	6.55	18.92	1.201	8.00	0.04	-163	
2Q14	6.53	19.72	1.187	11.10	0.11	-65	
3Q14	6.60	22.73	*	7.88	0.02	-86	
4Q14	6.58	21.05	1.441	6.77	0.00	-89	
P-59							
1Q12	6.56	16.14	1.152	8.31	0.00	-26	
2Q12	6.59	19.27	*	3.30	0.00	-23	
3Q12	6.63	21.74	1.220	9.00	0.00	-79	
4Q12	6.57	17.90	*	7.16	0.00	14	
1Q13	6.64	16.36	1.208	4.99	0.00	-82	
2Q13	6.54	18.74	1.109	3.91	0.00	-119	
3Q13	6.64	21.34	1.202	3.31	0.05	-107	
4Q13	6.63	20.31	1.318	4.96	0.00	-96	
1Q14	6.57	17.87	1.486	11.88	0.04	-203	
2Q14	6.61	18.96	1.514	17.69	0.18	-92	
3Q14	6.61	23.29	1.990	6.10	0.00	-105	
4Q14	6.62	21.78	1.361	8.52	0.00	-103	
P-66							
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.42	20.82	*	19.95	0.00	-11	
3Q12	6.41	22.52	1.372	20.89	0.00	-53	
4Q12	6.44	18.80	1.353	21.29	0.00	-161	
1Q13	6.48	19.00	0.943	14.28	0.00	-79	
2Q13	6.40	19.20	1.198	13.65	0.00	-133	
3Q13	6.46	20.78	1.173	8.99	0.04	-81	
4Q13	6.46	20.11	1.429	13.42	0.02	-82	
1Q14	6.44	18.56	1.221	9.76	0.04	-87	
2Q14	6.45	21.06	1.203	7.90	0.00	-83	
3Q14	6.58	22.67	1.065	7.24	0.07	-89	
4Q14	6.50	19.76	1.098	10.97	0.00	-86	
P-68							
1Q12	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
2Q12	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
3Q12	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
4Q12	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
1Q13	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
2Q13	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
3Q13	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
4Q13	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
1Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
2Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
3Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.
4Q14	NM	NM	NM	NM	NM	NM	LNAPL encountered in well. No sample taken.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-74							
1Q12	6.84	11.70	0.233	6.86	0.87	101	
2Q12	6.84	19.17	0.367	8.55	0.37	28	
3Q12	6.68	20.31	0.580	10.52	0.00	1	
4Q12	6.60	18.13	*	14.87	0.00	-22	
1Q13	*	16.88	0.445	24.29	0.00	-39	
2Q13	6.99	16.19	0.175	14.65	1.42	-93	
3Q13	6.92	20.80	0.318	9.99	0.04	-122	
4Q13	6.68	18.27	0.447	19.33	0.00	-81	
1Q14	6.61	16.61	0.686	14.25	0.00	-103	
2Q14	7.36	16.48	0.316	10.22	4.52	-3	
3Q14	6.84	20.10	0.260	9.50	0.06	-133	
4Q14	7.26	18.44	0.165	9.64	7.10	68	
P-93A							
1Q12	6.65	15.81	1.195	9.38	6.14	5	
3Q12	6.71	20.89	1.144	43.60	5.20	-13	
4Q12	6.63	20.47	*	32.40	4.64	15	
1Q13	6.79	20.25	1.198	36.06	4.26	-66	
2Q13	6.85	19.70	1.433	33.41	5.83	-86	
3Q13	6.99	23.07	1.654	36.18	4.25	-83	
4Q13	7.15	26.33	1.618	72.75	5.89	-50	
1Q14	6.99	19.48	1.872	24.97	4.65	-74	
2Q14	7.02	20.74	2.104	18.21	4.97	-60	
3Q14	6.87	21.30	*	10.96	4.31	-50	
4Q14	6.77	20.15	1.949	9.66	3.50	-56	
P-93B							
1Q12	6.87	13.39	1.250	2.11	0.21	28	
3Q12	6.76	19.61	1.973	3.28	0.12	-65	
4Q12	6.77	17.79	*	0.76	0.00	-48	
1Q13	6.80	17.81	1.731	2.92	0.12	-116	
2Q13	6.84	17.21	1.666	3.54	0.97	-99	
3Q13	6.80	20.05	1.644	1.56	0.05	-117	
4Q13	6.85	18.53	1.928	9.70	1.75	-0.10	
1Q14	6.84	15.74	1.605	4.53	1.62	-87	
2Q14	6.93	18.96	1.454	3.43	3.47	-76	
3Q14	6.88	20.02	*	9.67	0.98	-108	
4Q14	6.87	18.71	1.642	2.85	0.18	-115	
P-93C							
1Q12	6.84	15.44	1.100	0.01	3.94	94	
3Q12	6.77	20.55	1.416	8.66	0.16	-45	
4Q12	6.78	18.27	*	0.00	0.02	19	
1Q13	6.91	17.76	0.916	0.83	0.12	-118	
2Q13	6.91	17.09	0.961	0.00	0.89	-74	
3Q13	6.83	20.08	1.550	0.69	0.08	-81	Initial Sample
	6.87	20.60	1.270	0.03	0.08	-111	Confirmation Sample
4Q13	6.91	18.92	1.366	0.28	0.87	-82	
1Q14	6.94	15.83	1.298	0.12	1.88	-67	
2Q14	6.89	18.31	1.308	4.81	0.95	-57	
3Q14	6.92	19.88	*	2.59	2.03	-74	
4Q14	6.91	18.37	1.320	8.93	0.00	-81	
P-93D							
1Q12	6.93	15.16	1.222	1.77	0.08	-23	
2Q12	6.93	19.04	*	3.31	0.00	-0.03	
3Q12	6.93	21.54	1.446	2.93	0.00	-88	
4Q12	7.76	17.20	1.623	2.10	NM	NM	
1Q13	7.07	16.25	1.187	4.91	0.00	-77	
2Q13	7.08	18.02	1.211	3.37	0.17	-111	
3Q13	7.04	21.16	1.306	1.21	0.12	-120	
4Q13	6.98	20.50	1.467	0.43	0.00	-103	
1Q14	6.93	17.14	1.378	0.58	0.04	-274	
2Q14	6.97	17.61	1.378	4.61	0.00	-103	
3Q14	7.01	20.51	*	5.34	0.00	-127	
4Q14	6.91	18.72	1.725	5.38	0.00	-99	Initial Sample
	6.88	17.63	1.651	9.22	0.11	-104	Confirmation Sample

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
CUMMULATIVE SUMMARY OF MAIN AQUIFER GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-114							
3Q12	7.13	23.30	1.153	9.01	0.53	-64	
4Q12	7.12	21.18	*	12.12	3.00	15	
1Q13	7.25	19.52	0.782	9.14	1.53	-96	
2Q13	7.33	20.80	0.941	31.68	1.83	-144	
3Q13	7.45	22.10	1.095	17.89	3.10	-103	
4Q13	7.16	20.73	1.191	15.82	2.36	-95	
1Q14	7.13	18.07	1.228	47.51	2.25	-86	
2Q14	7.36	20.07	1.245	18.06	1.85	-91	
3Q14	7.98	22.69	*	8.46	3.54	-110	
4Q14	7.30	20.31	1.382	29.21	2.65	-112	
ROST-3-MW (ROST-3-PZ)							
2Q12	6.94	19.34	*	9.40	0.35	15	Added to Interim GW Monitoring Program in 2Q12
3Q12	6.83	24.31	0.813	6.90	0.29	-95	
4Q12	6.84	15.50	*	6.38	0.63	-9.00	
1Q13	*	16.92	0.723	6.82	0.00	-124	2" Well Installed to replace ROST-3-PZ
2Q13	6.94	18.60	0.751	11.04	0.01	-319	
3Q13	6.95	18.57	0.773	33.57	0.00	-128	
4Q13	6.89	18.00	0.915	8.72	0.00	-111	
1Q14	6.95	16.14	0.939	9.80	0.00	-116	
2Q14	6.89	18.62	0.974	5.54	0.00	-127	
3Q14	6.88	19.20	*	9.54	0.00	-128	
4Q14	6.83	18.00	1.127	7.26	0.00	-117	
ROST-4-PZ(C)							
2Q12	6.77	20.00	2.128	0.40	0.00	-1	Added to Interim GW Monitoring Program 2Q12
3Q12	6.74	21.56	0.976	6.67	0.04	-94	
4Q12	6.75	18.50	*	0.81	0.02	-47	
1Q13	6.77	19.35	1.091	7.82	0.00	-173	
2Q13	6.75	19.22	1.334	1.67	0.01	-148	
3Q13	6.85	20.00	1.089	4.00	0.13	-111	
4Q13	6.69	18.87	1.769	5.71	0.00	-119	
1Q14	6.64	17.08	1.888	3.68	0.01	-79	
2Q14	6.61	20.07	2.351	5.94	0.09	-80	
3Q14	6.78	19.88	*	5.00	0.01	-104	
4Q14	6.75	19.09	1.662	5.57	0.00	-114	
T-12							
1Q12	6.85	15.13	0.801	13.15	0.00	-0.09	
2Q12	6.66	17.63	*	1.18	0.00	-37	
3Q12	6.79	18.86	1.259	4.54	0.00	-125	
4Q12	6.68	16.69	*	1.47	0.00	-2	
1Q13	6.93	15.73	1.075	2.11	0.00	-117	
2Q13	6.81	18.64	1.177	10.67	0.00	-122	
3Q13	7.06	20.34	1.200	5.39	0.01	-164	
4Q13	6.65	19.39	1.324	6.84	0.00	-97	
1Q14	6.91	16.38	1.183	1.47	0.03	-111	
2Q14	6.94	17.65	1.176	6.70	0.00	-128	
3Q14	6.85	21.13	1.700	3.45	0.01	-128	
4Q14	6.82	20.43	1.123	4.23	0.00	-125	

NOTES:

1) Field parameters were collected using the Troll 9500.

2) NM = Not Measured

3) * = Equipment malfunction. Results are suspect.

4) Negative parameter readings for Turbidity and DO are recorded as zero.

5) Monitoring well P-68 is also a part of the Interim Groundwater Monitoring Program, but has not been sampled due to the presence of LNAPL.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2b
CUMULATIVE SUMMARY OF PERCHED GROUNDWATER MONITORING WELL FIELD PARAMETERS

Well ID	pH	Temp (C)	Specific Cond (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	General Notes
P-60-12S							
2Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
P-60-13S							
2Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
ROST-5-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Well is dry.
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Well is dry.
1Q14	NM	NM	NM	NM	NM	NM	Well is dry.
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.
3Q14	NM	NM	NM	NM	NM	NM	Well is dry.
4Q14	NM	NM	NM	NM	NM	NM	Well is dry.
ROST-7-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
3Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
ROST-10-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Well is dry.
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Well is dry.
4Q13	NM	NM	NM	NM	NM	NM	Well is dry.
1Q14	NM	NM	NM	NM	NM	NM	Well is dry.
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.
3Q14	NM	NM	NM	NM	NM	NM	Well is dry.
4Q14	NM	NM	NM	NM	NM	NM	Well is dry.
ROST-21-PZ							
2Q12	NM	NM	NM	NM	NM	NM	Well is dry.
3Q12	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q12	NM	NM	NM	NM	NM	NM	Well is dry.
1Q13	NM	NM	NM	NM	NM	NM	Well is dry.
2Q13	NM	NM	NM	NM	NM	NM	Well is dry.
3Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q13	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
1Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
2Q14	NM	NM	NM	NM	NM	NM	Well is dry.
3Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP
4Q14	NM	NM	NM	NM	NM	NM	Slow recharge prevented sampling per the SOP

Notes:
1) NM = Not Measured

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-01	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.005	0.0142		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-102612	10/26/2012		41.22	NE																				
	MW1-ROX-121712	12/17/2012		41.22	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.005	0.0004 J		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.00097 U	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.01	0.00066		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-070914	7/9/2014		42.09	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW1-ROX-100614	10/6/2014	48.80 - 58.80	41.1	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-02	MW2-ROX-011612	1/16/2012	49.87 - 59.87	38.89	NE	<0.025	0.0161		<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	0.777
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.025	0.0145		<0.025	<0.025	0.0068 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	0.008 J	<0.005	<0.01	<0.01	<0.0025	<0.13	0.948
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.005	0.01		<0.005	<0.005	0.0078	0.001 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.009	<0.001	<0.002	<0.002	<0.0005	<0.025	0.952
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.025 UJ	0.0142		<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	0.0172 J	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	0.763
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.01	0.0192		<0.01	0.0176 J	0.0077 J	0.002 J	<0.01	<0.002	<0.002	0.0083	<0.002	<0.004	<0.01	0.0094 J	<0.002	<0.004	<0.004	<0.001	<0.05	0.676
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.05	0.0174		<0.025	0.0191 J	0.0085 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	0.0101 J	<0.005	<0.01	<0.01	<0.0025	<0.13	0.91
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.01 UJ	0.006		<0.005 UJ	<0.005	0.0073	0.0029 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0075	<0.001	<0.002	<0.002	<0.0005		1.57
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.01	0.0139		0.0133	<0.005	0.0082	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0104	<0.001	<0.002	<0.002	<0.0005	<0.025	0.942
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.01	0.0238		<0.005	0.0254	0.0096	0.0015 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0106	0.0043	<0.002	<0.002	<0.0005	<0.025	0.426
	MW2-ROX-041014	4/10/2014		44.66	NE	<0.01	0.0214		0.0136	0.0208	0.0077	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.009	<0.001	<0.002	<0.002	<0.0005	<0.025	0.478
	MW2-ROX-071414	7/14/2014		43.13	NE	<0.01	0.0102 J		<0.005	0.0194 J	0.0073 J	0.0013 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.008 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.955
	MW2-ROX-101014	10/10/2014	49.87 - 59.87	42.49	NE	<0.02 UJ	0.0132		<0.01	0.0145	0.0057 J	0.0011 J	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	0.0063 J	<0.002	<0.004	<0.004	<0.001	<0.05	0.386
MW-03	MW3-ROX-011612	1/16/2012	34.67 - 44.67	24.93	NE	<0.005	0.00091		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.005 UJ	0.0089		<0.005 UJ	<0.005	<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.005 UJ	0.0017		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.005	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.005 UJ	0.008		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.01 UJ	0.0059		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.01	0.00057		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0025
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.01	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-071114	7/10/2014		29.05	NE	<0.01	0.00062		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW3-ROX-100914	10/9/2014	34.67 - 44.67	28.18	NE	<0.01 UJ	0.0005		<0.005	<0.005	<0.005	0.00083 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																			
						Acetone	Benzene [1]	Butane	2-Butanone [1]	n-Butylbenzene [3]	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide [1]	Carbon tetrachloride [1]	Chlorobenzene [1]	Chloroethane	Chloroform [1]	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane [1]	Dichloromethane (Methylene chloride) [2]	1,2-Dichloropropane [2]	trans-1,3-Dichloropropene [2]	1,4-Dioxane [1]	Ethylbenzene [1]
				Screening Values (mg/L)		6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-04	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.005	0.115		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	0.0941		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.063 U	0.0933		<0.005	<0.005	<0.005	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	0.191		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00082 J
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.005	0.199		<0.005	0.0014 J	0.0017 J	0.002 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00083 J
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.01 UJ	0.354		<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004 UJ	<0.01	<0.01	<0.002	<0.004	<0.004	<0.001	<0.05	<0.002
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	9.04 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00052 J
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.005	8.96 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00056 J
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	21.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	<0.1
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.02	64.2		<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.01	<0.002	<0.004	<0.004	<0.001	<0.05	<0.002
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.01	72.9		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00081 J
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.01	12.2		<0.005	<0.005	0.0016 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.001	<0.05	0.0015
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.1	1.7		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	<0.01
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.01	2.01		<0.005	0.00058 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00048 J
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.01	0.553		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW4-ROX-071614	7/16/2014		40.18	NE	<0.01	1.88		<0.005	<0.005	<0.05	<0.05	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.01
	MW4-ROX-101614	10/16/2014	46.06 - 56.06	39.49	NE	<0.05	0.815		<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	<0.005
MW-05	MW5-ROX-011712	1/17/2012	33.97 - 43.97	24.76	NE	<0.005	0.0442		<0.005	<0.005	<0.005	0.0057	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.005	0.0532		<0.005	<0.005	0.0029 J	0.0073	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0014 J	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.005	0.0925		<0.005	<0.005	0.0015 J	0.007	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.00099 J	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.005 UJ	0.0628		<0.005	<0.005	<0.005	0.0059	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.005	0.0072		<0.005	<0.005	0.0016 J	0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.005	0.0018		<0.01	<0.005	0.0018 J	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.01	0.0075		<0.005	<0.005	<0.005	0.0085	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.01	0.0016		<0.005	<0.005	<0.005	0.0064	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-011714	1/17/2014		29.59	NE	<0.01	0.002		<0.005	<0.005	0.002 J	0.0064	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-041014	4/10/2014		30.09	NE	0.021 J	0.0037		<0.005	<0.005	0.0017 J	0.0062	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW5-ROX-071414	7/14/2014		28.59	NE	<0.01	0.001		<0.005	<0.005	0.0011 J	0.0046 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW-5-ROX-100914	10/9/2014		27.75	NE	<0.01 UJ	0.028		<0.005	<0.005	0.00083 J	0.0049 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-06A	MW6A-ROX-011712	1/17/2012	34.83 - 44.83	26.74	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	0.00077		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.005	0.0016		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.12 UJ	0.00073		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.005	0.0276		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.005 UJ	0.0017		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040814	4/8/2014		32.16	NE	0.11	0.0011		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	0.116	0.001		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6A-ROX-071014	7/10/2014		30.75	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6A-ROX-100814	10/8/2014	34.83 - 44.83	29.84	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																			
						Acetone	Benzene [1]	Butane	2-Butanone [1]	n-Butylbenzene [3]	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide [1]	Carbon tetrachloride [1]	Chlorobenzene [1]	Chloroethane	Chloroform [1]	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane [1]	Dichloromethane (Methylene chloride) [2]	1,2-Dichloropropane [2]	trans-1,3-Dichloropropene [2]	1,4-Dioxane [1]	Ethylbenzene [1]
				Screening Values (mg/L)		6.3	0.005		4.2	0.35			0.7	0.005	0.1		0.07				1.4	0.005	0.005	0.001	0.0077	0.7
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-011712	1/17/2012	64.05 - 69.05	26.77	NE	<0.005	0.0013		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00086		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0032 U	0.00045 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005 UJ	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005 UJ	0.00043 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.01	0.0009		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6B-ROX-071014	7/10/2014		30.81	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6B-ROX-100814	10/8/2014	64.05 - 69.05	29.87	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-06C	MW6C-ROX-011712	1/17/2012	84.95 - 89.95	26.50	NE	<0.005	0.0028		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.003 U	0.00061		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005 UJ	0.00035 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.0005 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005 UJ	0.00062		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.01	0.0021		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6C-ROX-071014	7/10/2014		30.60	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6C-ROX-100814	10/8/2014	84.95 - 89.95	29.67	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-06D	MW6D-ROX-011712	1/17/2012	104.72 - 109.72	26.33	NE	<0.005	0.0022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005 UJ	0.00068		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005 UJ	0.00055		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	0.00053 J		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005 UJ	0.00055		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.01	0.0064		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-071014	7/10/2014		31.47	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW6D-ROX-100814	10/8/2014	104.72 - 109.72	29.53	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW6D-ROX-100814-DUP	10/8/2014		29.53	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

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						VOCs																			
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-07	MW7-ROX-011812	1/18/2012	42.92 - 52.92	38.10	NE	<0.166 U	1330 J		<0.005	0.0026 J	0.0021 J	0.003 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0727
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.146 U	1110		<0.005	0.0027 J	0.0022 J	0.0029 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0015 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0718
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	738		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	<0.1
	MW7-ROX-080712	8/7/2012		39.50	NE	0.199	591		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	0.0619
	MW7-ROX-103012	10/30/2012		41.23	NE	<10 UJ	833		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<10	<2	<4	<4	<1	<50	<2
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10 UJ	863		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4 UJ	<10	<10	<2	<4	<4	<1	<50	<2
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	1230		<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<20	<4	<8	<8	<2	<100	<4
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	1320		<20	<20	<20	<20	<20	<4	<4	<8	<4	<8	<20	<20	<4	<8	<8	<2	<100	<4
	MW7-ROX-041013	4/10/2013		42.70	NE	<20	475		<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<20	499		<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.01	1000 J		<0.005	<0.005	0.0023 J J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0016 J J	<0.001	<0.002	<0.002	<0.001	<0.05	0.2 J
	MW7-ROX-101613	10/16/2013		40.64	NE	<20	553		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW7-ROX-013014	1/30/2014		42.94	NE	<25	1490		<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<5	<1.3	<63	<2.5
	MW7-ROX-041614	4/16/2014		43.79	NE	<50	1390		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<10	<2.5	<130	<5
	MW7-ROX-071614	7/16/2014		42.05	NE	<0.01	1290		<0.005	0.0036 J J	0.0022 J J	0.0022 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0015 J J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.208 J
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.01	1390		<0.005	0.0034 J J	0.0023 J J	0.0022 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0015 J J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.206 J
	MW7-ROX-101614	10/16/2014	42.92 - 52.92	41.31	NE	<50	1130		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<10	<2.5	<130	<5
	MW7-ROX-101614-DUP	10/16/2014		41.31	NE	<50	984		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<10	<2.5	<130	<5
MW-08	MW8-ROX-011812	1/18/2012	33.60 - 43.60	29.15	NE	<0.005	386		<0.005	0.0043 J	0.003 J	0.002 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0022 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.285
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	1070		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.393
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	1040		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.396
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.378 U	397 J		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01	<0.5	0.249
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.235 U	653 J		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	0.232
	MW8-ROX-103012	10/30/2012		32.32	NE	<5 UJ	523		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<5	<1	<2	<2	<0.5	<25	<1
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	1120 J		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW8-ROX-041013	4/10/2013		33.77	NE	<50	969		<50	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<10	<2.5	<130	<5
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.008 U	532		<0.005	<0.005	0.0033 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0023 J	<0.001	<0.002	<0.002	<0.001	<0.05	0.508
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.01	494		<0.005	<0.005	0.0031 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	<0.001	<0.002	<0.002	<0.001	<0.05	0.442 J
	MW8-ROX-101613	10/16/2013		31.59	NE	<20	360		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<20	351		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW8-ROX-013014	1/30/2014		34.02	NE	<25	721		<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<5	<1.3	<63	<2.5
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<25	748		<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<5	<1.3	<63	<2.5
	MW8-ROX-041614	4/16/2014		34.73	NE	<20	862		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	<20	1060		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	MW8-ROX-071614	7/16/2014		33.01	NE	<0.01 UJ	280		<0.005 UJ	0.0069 J	0.0042 J J	0.0028 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0032 J J	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.266
	MW8-ROX-101614	10/16/2014	33.60 - 43.60	32.23	NE	<10	486		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	0.305 J

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-09	MW9-ROX-011612	1/16/2012	46.45 - 56.45	39.50	NE	<0.005	0.0031		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-050312	5/3/2012		41.03	NE	<0.005	0.001		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.005 UJ	0.00058		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.123 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.005	<0.0005		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-070813	7/8/2013		42.35	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.0015 U	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.01	0.0044		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-070914	7/9/2014		44.35	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW9-ROX-100714	10/7/2014	46.45 - 56.45	43.52	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-10	MW10-ROX-011612	1/16/2012	44.43 - 54.43	39.28	NE	<0.005	0.0026		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	0.00079		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005 UJ	0.00058		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW10-ROX-102612	10/26/2012		43.08	NE																					
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	0.00095 J	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.101 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0074	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.025	0.003		<0.0051 U	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.001	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001		<0.005
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	0.00067		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.0016 U	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-011514	1/15/2014		44.42	NE	0.0174	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-040714	4/7/2014		45.00	NE	0.0684	0.0018		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0032	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-070914	7/9/2014		44.35	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW10-ROX-100714	10/7/2014	44.43 - 54.43	43.58	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-11	MW11-ROX-011712	1/17/2012	41.66 - 51.66	37.44	NE	<0.005	0.0024		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.005	0.00087		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.005 UJ	0.00073		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.005 UJ	<0.00065 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.001 U	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.01	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-070914	7/9/2014		41.75	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW11-ROX-100714	10/7/2014	41.66 - 51.66	40.89	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

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CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																			
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
MW-12	MW12-ROX-011712	1/17/2012	41.92 - 51.92	37.70	NE	<0.005	0.0023		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.005	0.0028		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.005	0.00066		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.005 UJ	0.0013		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.35 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.005 UJ	<0.00088 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-070914	7/9/2014		41.97	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW12-ROX-100614	10/6/2014	41.92 - 51.92	40.98	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-13	MW13-ROX-012012	1/20/2012	25.57 - 35.57	24.77	NE	<0.005	0.0742 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.005	0.009		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.037 U	0.0069 J		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	<0.001 UJ
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	0.0048		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.005	0.0067 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0319 UJ	0.0102 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-041114	4/11/2014		30.15	NE	<0.01	0.00058		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-070714	7/7/2014		28.49	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW13-ROX-101014	10/10/2014	25.57 - 35.57	27.48	NE	<0.01 UJ	0.00037 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-14	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.005	0.009		<0.005	0.0014 J	0.0026 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-080312	8/3/2012		NM	NE	<0.005	0.0131		<0.005	0.0015 J	0.0027 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00065 J
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005 UJ	0.00093		<0.005	<0.005	0.0028 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	0.0017		<0.005	0.0014 J	0.0032 J	0.0011 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.01	0.0125 J		<0.01	0.0021 J	0.0048 J	0.0016 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.01	0.00064		<0.005	0.00066 J	0.002 J	0.0013 J	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.01	<0.0005		<0.005	<0.005	0.0013 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0011 J	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-012914	1/29/2014		33.67	NE	<0.01	<0.0005		<0.005	<0.005	0.0013 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-041114	4/11/2014		34.30	NE	<0.01	0.0017		<0.005	<0.005	<0.005	0.00046 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-070714	7/7/2014		32.82	NE	<0.01 UJ	<0.0005		<0.005	<0.005	0.00042 J	0.00047 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW14-ROX-101414	10/14/2014	33.42 - 43.42	31.65	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	0.00063 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.005	0.00057 J		0.0029 J	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005 UJ	<0.00058 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.01	<0.00062 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.01	0.00034 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW16-ROX-071014	7/10/2014		43.15	NE	<0.01 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	MW16-ROX-100714	10/7/2014	37.06 - 47.06	42.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																				
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	2.12		<0.295 U	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3 UJ	3.45
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.25	2.09		<0.31 U	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3 UJ	3.19
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.005 UJ	1.5		<0.005	0.0413 J	0.0142 J	0.0171 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0122 J	<0.001	<0.002	<0.002	<0.0005	<0.025	2.44
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.01 UJ	1.19		<0.005 UJ	<0.005	0.0116	0.0142	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0087	<0.001	<0.002	<0.002	<0.0005		2.07
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.01 UJ	1.11		<0.005 UJ	<0.005	0.0116	0.0148	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0087	<0.001	<0.002	<0.002	<0.0005		1.79
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.01	1.33		<0.005	0.0286	0.012	0.0167	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.01	<0.001	<0.002	<0.002	<0.0005	<0.025	3.79
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.01	1.39		<0.005	0.0276	0.0118	0.0163	<0.005	<0.001	<0.001	0.0018 J	<0.001	<0.002	<0.005	0.0095	<0.001	<0.002	<0.002	<0.0005	<0.025	3.97
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.01	1.47		0.0804	0.0357	0.0128	0.0147	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	0.0028	<0.002	<0.002	<0.0005	<0.025	3.17
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.01	1.58		0.0815	0.0355	0.0127	0.0146	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	<0.001	<0.002	<0.002	<0.0005	<0.025	3.4
	MW22-ROX-041014	4/10/2014		43.15	NE	0.0911 J	1.7		0.0334	0.0331	0.0128	0.0152	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0094	<0.001	<0.002	<0.002	<0.0005	<0.025	3.32
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.01 UJ	1.56		0.0287	0.0319	0.0123	0.0144	<0.005	<0.001	0.00046 J	<0.002	<0.001	<0.002	<0.005	0.0089	<0.001	<0.002	<0.002	<0.0005	<0.025	3.02
	MW22-ROX-071414	7/14/2014		41.85	NE	<0.01	1.76		0.0185 J	0.0349 J	0.013 J	0.0137 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0085 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.93
	MW22-ROX-101014	10/10/2014	37.88 - 47.88	41.43	NE	<0.1 UJ	1.62		<0.05	0.0165 J	0.0066 J	0.0096 J	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.0045 J	<0.01	<0.02	<0.02	<0.005	<0.25	1.88
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.005	0.0029		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0012
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.0157 UJ	<0.0005		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-071114	7/10/2014		42.97	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	MW24-ROX-100814	10/8/2014	38.89 - 48.89	42.16	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-25	MW25-ROX-102114	10/21/2014	35.59 - 45.59	36.44	NE	<20	501		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
MW-26	MW26-ROX-102114	10/21/2014	38.15 - 48.15	39.43	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-27	MW27-ROX-102114	10/21/2014	39.79 - 49.79	41.57	NE	<0.01	0.00033 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
MW-28	MW28-ROX-102114	10/21/2014	33.61 - 43.61	36.44	NE	<0.01	0.0081		<0.005	<0.005	0.00083 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.00049 J	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
P-54	P54-ROX-011712	1/17/2012	38.00 - 63.00	37.17	NE	<0.005	0.0025		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.005	0.00082		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	P54-ROX-103012	10/30/2012		40.70	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-041013	4/10/2013		41.80	NE	<0.01	0.172		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-050313	5/3/2013		41.80	NE	<0.01 UJ	0.0028		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-071113	7/11/2013		39.07	NE	<0.01 UJ	<0.0005		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		<0.001
	P54-ROX-100813	10/8/2013		39.94	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-011514	1/15/2014		42.20	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-040914	4/9/2014		42.80	NE	<0.01	0.00081		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-071114	7/10/2014		41.71	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P54-ROX-100814	10/8/2014	38.00 - 63.00	40.88	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
P-55	P55-ROX-011912	1/19/2012	39.82 - 64.82	41.09	NE	<0.005	<0.197 U		<0.005	<0.005	0.0036 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0656
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.005	<0.202 U		<0.005	<0.005	0.0038 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0683
	P55-ROX-050912	5/9/2012		42.44	NE	<0.005	0.388		<0.005	0.0099	0.0093	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.41
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.25	0.571		<0.25	0.0533	0.011 J	<0.05	<0.05	<0.05	<0.05	<0.1	<0.01	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01		0.316
	P55-ROX-012113	1/21/2013		43.60	NE	<0.005	0.538		<0.253 U	0.0203	0.0143	0.0013 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0055	<0.001	<0.002	<0.002	<0.0005	<0.025	0.366
	P55-ROX-041513	4/15/2013		43.63	NE	<0.02 UJ	0.434		<0.01	0.0052 J	0.0196	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.01	<0.002	<0.004	<0.004	<0.001	<0.05	0.35
	P55-ROX-071613	7/16/2013		40.06	NE	<0.01	0.573	0.88	<0.005	0.0256	0.0155	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0065	<0.001	<0.002	<0.002	<0.0005	<0.025	0.495
	P55-ROX-101013	10/10/2013		41.67	NE	<0.01	0.757		<0.005	0.0239	0.0147	0.0013 J	<0.005	<0.001	<0.001	0.005	<0.001	0.0017 J	<0.005	0.0066	<0.001	<0.002	<0.002	<0.0005	<0.025	0.602

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Acetone	Benzene [1]	Butane	2-Butanone [1]	n-Butylbenzene [3]	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide [1]	Carbon tetrachloride [1]	Chlorobenzene [1]	Chloroethane	Chloroform [1]	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane [1]	Dichloromethane (Methylene chloride) [2]	1,2-Dichloropropane [2]	trans-1,3-Dichloropropene [2]	1,4-Dioxane [1]	Ethylbenzene [1]
			Screening Values (mg/L)			6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-56	P56-ROX-011912	1/19/2012	40.82 - 65.82	41.81	NE	<0.005	0.335		<0.005	<0.005	0.0035 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.227
	P56-ROX-050812	5/8/2012		43.09	NE	<0.23 U	0.144		<0.005	0.0086	0.0051	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	0.0069	<0.005	0.0044 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.14
	P56-ROX-080612	8/6/2012		43.60	NE	<0.025 UJ	0.164		<0.025 UJ	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01 UJ	<0.01	<0.0025		0.101
	P56-ROX-103112	10/31/2012		44.80	NE	<0.005 UJ	0.176		<0.005	<0.005	0.005	0.0021 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0041 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.29
	P56-ROX-011713	1/17/2013		45.65	NE	<0.025	0.191		<0.025	0.0031 J	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	0.0088
	P56-ROX-041213	4/12/2013		46.12	NE	<0.02 U	0.131		<0.01	<0.01	0.0142	<0.01	<0.01	<0.002	<0.002	<0.004	<0.002	<0.004	<0.01	<0.01	<0.002	<0.004	<0.004	<0.001	<0.05	0.691
	P56-ROX-071513	7/15/2013		43.25	NE	<0.156 U	0.131		<0.005	0.0141	0.0072	0.0038 J	<0.005	<0.001	<0.001	0.0047	<0.001	<0.002	<0.005	0.0061	<0.001	<0.002	<0.002	<0.0005	<0.025	2
	P56-ROX-101013	10/10/2013		44.48	NE	<0.01	0.14		<0.005	0.0088	0.005	0.0018 J	<0.005	<0.001	<0.001	0.0038	<0.001	<0.002	<0.005	0.0046 J	<0.001	<0.002	<0.002	0.001	<0.025	1.58
	P56-ROX-012214	1/22/2014		46.35	NE	<0.01	0.0895		<0.005	0.0033 J	0.0023 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.305
	P56-ROX-041414	4/14/2014		47.32	NE	<0.01	0.128		<0.005	0.0069	0.0046 J	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0034 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.608
	P56-ROX-070814	7/8/2014		45.97	NE	0.0626 J	0.127 J		0.0132 J	0.0159 J	0.0073 J	0.0034 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0058 J	0.0018 J	<0.002	<0.002	<0.0005	<0.025 UJ	1.71 J
	P56-ROX-101314	10/13/2014	40.82 - 65.82	45.05	NE	<0.01 UJ	0.107		<0.005	0.0062	0.004 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0035 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.164
P-57	P57-ROX-021312	2/13/2012	40.46 - 65.46	42.13	NE	<2.5 UJ	126		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	0.719
	P57-ROX-050712	5/7/2012		42.92	NE	<0.5	147		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	1.07
	P57-ROX-080612	8/6/2012		43.53	NE	<0.25 UJ	99.4		<0.25 UJ	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025		0.795
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.005 UJ	106		<0.005 UJ	<0.005	0.0107	0.0124	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0109	<0.001	<0.002	<0.002	<0.0005		0.759 E
	P57-ROX-110512	11/5/2012		44.98	NE	<2.5	142		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	1.09
	P57-ROX-012913	1/29/2013		45.92	NE	<2.5	114		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	1.43	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	1.1
	P57-ROX-041113	4/11/2013		46.29	NE	<5	141		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	1.19
	P57-ROX-071613	7/16/2013		43.38	NE	<0.01	254		<0.005	0.0143 J	0.0131 J	0.0103 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0119 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.59
	P57-ROX-101413	10/14/2013		44.38	NE	<0.01	288		<0.005	0.0129	0.0116	0.0163	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0113	<0.001	<0.002	<0.002	<0.0005	<0.025	1.1
	P57-ROX-020314	2/3/2014		46.57	NE	<10	261		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	0.697 J
	P57-ROX-041514	4/15/2014		46.70	NE	<0.01 UJ	384		0.0055	0.0151	0.0131	0.0147	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0114	<0.001	<0.002	<0.002	<0.0005	<0.025	1.08
	P57-ROX-070814	7/8/2014		45.95	NE	0.0497 J	384		<0.005 UJ	0.011 J	0.0091 J	0.0066 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0081 J	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	1.12
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	0.0441 J	377		0.0086 J	0.0114 J	0.0097 J	0.007 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0085 J	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	1.21
	P57-ROX-101414-DUP	10/14/2014	40.46 - 65.46	45.00	NE	<20 UJ	220		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	1.77 J
	P57-ROX-101414	10/14/2014		45.00	NE	<20 UJ	255		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	3.86
P-58	P58-ROX-011912	1/19/2012	40.21 - 65.21	39.73	NE	<0.005	487		<0.005	0.027	0.0215	0.056 J	<0.005	<0.001	0.0013	<0.002	<0.001	<0.002	<0.005	0.0149	<0.001	<0.002	<0.002	<0.0005	<0.025	0.97 J
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	474		<0.005	0.0235 J	0.0168 J	0.0387 J	<0.005	<0.001	0.0014 J	<0.002	<0.001	<0.002	<0.005	0.0123 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.03
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	477		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	1.03
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	440		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	1
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1 UJ	313		<0.1 UJ	<0.1	<0.1	0.0317 J	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01		0.889
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	308		<0.05	<0.05	0.0176 J	0.0339 J	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	0.0118 J	<0.01	<0.02	<0.02	<0.005	<0.25	0.931
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5 UJ	415		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1 UJ	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.844
	P58-ROX-121012	12/10/2012		43.09	NE																					
	P58-ROX-012213	1/22/2013		44.21	NE	<5	552		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	1.27
	P58-ROX-041113	4/11/2013		44.40	NE	<20	532		<20	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	1.28 J
	P58-ROX-071613	7/16/2013		41.49	NE	<0.01	398		<0.005	0.0239	0.0215	0.0532	<0.005	<0.001	0.0017	<0.002	<0.001	<0.002	<0.005	0.0152	<0.001	<0.002	<0.002	<0.0005	<0.025	1.07
	P58-ROX-101413	10/14/2013		42.19	NE	<0.01	647		<0.005	0.023	0.0235	0.0483	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0143	<0.001	<0.002	<0.002	<0.0005	<0.025	1.53
	P58-ROX-020314	2/3/2014		44.66	NE	<10	496		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	0.767 J
	P58-ROX-041514	4/15/2014		45.66	NE	<0.01 UJ	782		0.0056 J	0.0216 J	0.0185 J	0.0396 J	<0.005	<0.001	0.0013 J	<0.002	<0.001	<0.002	<0.005	0.0116 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.891 J
	P58-ROX-071814	7/18/2014		43.80	NE	<20	406		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<25 UJ	<2
	P58-ROX-101514	10/15/2014	40.21 - 65.21	43.14	NE	<5	493		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	0.793

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-59	P59-ROX-011912	1/19/2012	47.91 - 72.91	42.88	NE	<0.005	6.61		<0.158 U	<0.005 UJ	0.0054	0.0031 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0036 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.28
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	7.04		<0.185 U	0.0264 J	0.0055	0.0372 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0038 J	<0.001	<0.002	<0.002	<0.0005	<0.025	1.4
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	7.86		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3	1.93
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1 UJ	11		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01		1.74
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5 UJ	10.3		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	1.87
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5 UJ	10.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	1.94
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	12.1		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3	1.9
	P59-ROX-041213	4/12/2013		46.95	NE	<0.5 UJ	15		<0.25	<0.25	0.289	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3	2.85
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.5 UJ	13.4		<0.25	<0.25	0.288	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3	2.57
	P59-ROX-071613	7/16/2013		44.13	NE	<0.01	10.2		<0.005	0.0213 J	0.0068 J	0.0027 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0046 J J	<0.001	<0.002	<0.002	<0.0005	<0.025	2.4
	P59-ROX-101013	10/10/2013		45.50	NE	<0.01	14.7		<0.005	0.0224	<0.005	0.0024 J	<0.005	<0.001	<0.001	0.0034	<0.001	<0.002	<0.005	0.0051	<0.001	<0.002	<0.002	<0.0005	<0.025	3.19
	P59-ROX-020314	2/3/2014		47.35	NE	<0.2	15.9		<0.1	0.0165 J	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01	<0.5	1.86
	P59-ROX-041514	4/15/2014		48.60	NE	<0.01 UJ	14.8		0.0253	0.0181	0.0035 J	0.0014 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0029 J	0.0023	<0.002	<0.002	<0.0005	<0.025	1.69
	P59-ROX-070814	7/8/2014		47.69	NE	0.057 J	12.4		0.0169 J	0.0251 J	0.0073 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0046 J J	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	1.92
	P59-ROX-101414	10/14/2014	47.91 - 72.91	46.18	NE	<0.01 UJ	12		<0.005	0.0278 J	0.0097 J	0.0024 J J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0043 J J	<0.001	<0.002	<0.002	<0.0005	<0.025	2.33
P-66	P66-ROX-051012	5/10/2012	34.72 - 59.72	32.48	NE	<0.005	0.0193		<0.005	0.0139	0.019	0.0059	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0015
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	0.0994		<0.005	0.0118	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0013
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	0.223		<0.005	0.0145	0.02	0.0054	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0012
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	0.0896		<0.005	0.0129	0.0227	0.0087	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0014
	P66-ROX-041113	4/11/2013		36.03	NE	<0.01	0.0444		<0.01	0.0199	0.0249	0.0104	<0.005	<0.001	<0.001	0.00065 J	<0.001	<0.002	<0.005	0.0093	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0036
	P66-ROX-071213	7/12/2013		33.20	NE	<0.01	0.187		<0.005	0.0146	0.0221	0.006	<0.005	<0.001 UJ	0.00059 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0022
	P66-ROX-101013	10/10/2013		33.66	NE	0.0095 J	0.0646		<0.005	0.0141	0.0186	0.0067	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0045
	P66-ROX-110713	11/7/2013		33.66	NE	<0.01	0.03		<0.005	0.0088	0.0102	0.0071	<0.005	<0.001	0.0007 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0016
	P66-ROX-012914	1/29/2014		36.39	NE	<0.01	0.008		<0.005	0.016	0.0205	0.0053	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0013
	P66-ROX-041114	4/11/2014		37.10	NE	<0.01	0.0052		<0.005	0.0129	0.0168	0.0041 J	<0.005	<0.001	0.00052 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0014
	P66-ROX-070714	7/7/2014		35.60	NE	<0.01 UJ	0.0429		<0.005	0.0112	0.0147	0.0023 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0016
	P66-ROX-101414	10/14/2014	34.72 - 59.72	34.48	NE	<0.01 UJ	0.0212		<0.005	0.0135	0.0173	0.0036 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0013
P-74	P74-ROX-011912	1/19/2012	44.43 - 69.43	38.77	NE	<0.005	<0.205 U		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	0.336		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0081
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05 UJ	2.46		<0.05 UJ	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005		0.0782
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	3.5		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01	<0.5	0.0493
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	4.99		<0.1	0.0143 J	<0.1	<0.1	<0.1	<0.02	<0.02	<0.04	<0.02	<0.04	<0.1	<0.1	<0.02	<0.04	<0.04	<0.01	<0.5	0.0997
	P74-ROX-041113	4/11/2013		42.83	NE	<0.01	0.144		<0.01	0.0026 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0086
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0046 U	0.117		<0.005	0.0088	0.002 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0017 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0306
	P74-ROX-101413	10/14/2013		41.72	NE	<0.01	1.55		<0.005	0.0158	0.003 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0653
	P74-ROX-012414	1/24/2014		43.35	NE	<0.01	4.45		<0.005	0.0252	0.0031 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0031 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.115
	P74-ROX-041514	4/15/2014		44.74	NE	0.0398 J	0.0349		<0.005	0.0013 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0043
	P74-ROX-070814	7/8/2014		43.02	NE	<0.01 UJ	0.309		<0.005	0.0138	0.0014 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	0.0374
	P74-ROX-101414	10/14/2014	44.43 - 69.43	41.48	NE	<0.01 UJ	0.00068		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

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						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-93A	P93A-ROX-012012	1/20/2012	48.17 - 63.17	41.66	NE	<0.005	164 J		<0.005	0.0037 J J	0.0045 J	0.0122	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0023 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.185
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0441 U	200		<0.005 UJ	0.005 J	0.0069 J	0.0179 J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	0.0035 J J	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.38 J
	P93A-ROX-080912	8/9/2012		43.66	NE	<1.63 U	87		<0.005	0.0027 J	0.0048 J	0.0128	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0022 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.225
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5 UJ	148		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.265
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5 UJ	156		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.262
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	101		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	98.5		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13 UJ	<0.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	0.255 J
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<5	120		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0053 U	89.1		<0.005	<0.005	0.0056	0.0916	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	<0.001	<0.002	<0.002	<0.001	<0.05	0.162
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.01 UJ	197		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0025 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.264
	P93A-ROX-012914	1/29/2014		46.53	NE	<5	136		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93A-ROX-041714	4/17/2014		47.41	NE	<5	132		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93A-ROX-071814	7/18/2014		45.70	NE	<10	170		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<13 UJ	<1
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<10	174		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<13 UJ	<1
	P93A-ROX-101514	10/15/2014	48.17 - 63.17	45.06	NE	<5	293		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	0.229 J
	P93A-ROX-101514-DUP	10/15/2014		45.06	NE	<5	277		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	0.226 J
P-93B	P93B-ROX-012012	1/20/2012	74.60 - 76.60	41.72	NE	<0.005	337		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	0.0831 J	0.0274 J
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0747 U	304		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0379 J
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0672 U	317		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0741
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.5 UJ	162 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	<0.1
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.5 UJ	413 J		<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.1	<0.2	<0.1	<0.2	<0.5	<0.5	<0.1	<0.2	<0.2	<0.05	<2.5	0.0695 J
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	415		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25 UJ	<1
	P93B-ROX-041113	4/11/2013		46.32	NE	<5	618		<5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.01	296		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.001	<0.05	0.0652
	P93B-ROX-101613	10/16/2013		44.43	NE	<20	187		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<20	180		<10	<10	<10	<10	<10	<2	<2	<4	<2	<4	<10	<10	<2	<4	<4	<1	<50	<2
	P93B-ROX-012814	1/28/2014		46.58	NE	<10	242		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	<1
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<10	293		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<2	<0.5	<25	<1
	P93B-ROX-041714	4/17/2014		47.46	NE	<5	134		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<5	126		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
	P93B-ROX-071714	7/17/2014		45.75	NE	<0.01 UJ	175		<0.005 UJ	<0.005 UJ	<0.005 UJ	0.00042 J J	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.002 UJ	<0.001 UJ	<0.002 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.002 UJ	<0.002 UJ	<0.0005 UJ	<0.025 UJ	0.0236 J
	P93B-ROX-101514	10/15/2014	74.60 - 76.60	45.15	NE	<5 UJ	241		<2.5	<2.5	<2.5	<2.5	<2.5	<0.5	<0.5	<1	<0.5	<1	<2.5	<2.5	<0.5	<1	<1	<0.25	<13	<0.5
P-93C	P93C-ROX-012012	1/20/2012	94.26 - 96.26	41.57	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	0.0057		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0056 U	0.00084		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0056 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.01	101		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.001	<0.05	0.0041
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.5	19.1		<0.25	<0.25	<0.25	<0.25	<0.25	<0.05	<0.05	<0.1	<0.05	<0.1	<0.25	<0.25	<0.05	<0.1	<0.1	<0.025	<1.3	<0.05
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.01	1.4		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-071714	7/17/2014		45.61	NE	<0.01	1.55		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93C-ROX-101514	10/15/2014	94.26 - 96.26	44.99	NE	<0.01	0.00075		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																			
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-93D	P93D-ROX-012012	1/20/2012	125.75 - 127.75	41.77	NE	<0.005	0.0513		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.005	0.0056		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005 UJ	0.0134		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	0.049		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	0.106		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00069 J
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.01	<0.0005		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.01	0.0014		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-013114	1/31/2014		46.62	NE	<0.01	0.0012		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.00062 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	0.0044	<0.0005	<0.025	<0.001
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.01	0.0022		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.00069 J	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	0.0164	<0.0005	<0.025	<0.001
	P93D-ROX-071714	7/17/2014		45.78	NE	<0.01	0.00064		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P93D-ROX-101514	10/15/2014	125.75 - 127.75	45.14	NE	<0.1	36.4		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	<0.01
	P93D-ROX-110414	11/4/2014		45.14	NE	<0.01	19.9		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	0.0079	<0.0005	<0.025	0.0013
P-114	P114-ROX-012012	1/20/2012	32.67 - 52.67	27.17	NE	<0.005	0.0011 J		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-050912	5/9/2012		28.09	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.0756 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0144 UJ	<0.0005		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0059 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.251 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.245 U	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-101713	10/17/2013		29.43	NE	0.0047 J	0.00074		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-012814	1/28/2014		32.11	NE	0.142	0.0013		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-042114	4/21/2014		32.22	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	P114-ROX-071814	7/18/2014		30.87	NE	<0.01	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	<0.001
	P114-ROX-101714	10/17/2014	32.67 - 52.67	29.43	NE	<0.01	<0.0005		<0.005	0.0052 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	0.0006 J J	<0.002	<0.0005	<0.025	0.00045 J J
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.61 U	0.0074		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0167
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.005	0.0041		<0.005	<0.005	<0.005	0.00072 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0047
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.005	0.0052		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0018
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005	0.0051 J		<0.005	0.0028 J	0.0013 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0011 J	<0.001	<0.002	<0.002	<0.0005	<0.025 UJ	0.0296
	ROST3MW-ROX-040513	4/5/2013				<0.005 UJ	0.0605		<0.005	<0.005	0.0011 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0012 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0136
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.01 UJ	0.0125		<0.005 UJ	<0.005	0.0014 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0014 J	<0.001	<0.002	<0.002	<0.0005		0.218
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.01	0.0033		<0.0164	0.00073 J	<0.005	<0.005	<0.005	<0.001	<0.001	0.0034	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0182
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.01	0.004		<0.005	0.0012 J	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.008
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.01	0.0075		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0055
	ROST3MW-ROX-071414	7/14/2014		41.88	NE	<0.01	0.0058		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.008
	ROST3MW-ROX-100914	10/9/2014	37.81 - 47.81	41.31	NE	<0.01 UJ	0.003		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0398

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Acetone	Benzene	Butane	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	Dichloromethane (Methylene chloride)	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene
					Screening Values (mg/L)	6.3 [1]	0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.07 [1]				1.4 [1]	0.005 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	<0.001
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.005	0.0849		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.177
	ROST4PZ-ROX-102912	10/29/2012		40.75	NE	<0.005 UJ	0.0033		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0014
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.005	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0013
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.01	0.0153 J		<0.01	<0.005	<0.005	<0.005	<0.005	<0.001 UJ	<0.001 UJ	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002 UJ	<0.0005 UJ	<0.025	0.0028 J
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.01 UJ	0.0497		<0.005 UJ	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005		0.0651
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.01	0.00066		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0064
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.01	0.0015		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0039
	ROST4PZC-ROX-041014	4/10/2014		42.05	NE	<0.01	0.0019		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.00059 J
	ROST4C-ROX-071114	7/10/2014		42.22	NE	<0.01	0.0751		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0594
	ROST4PZC-ROX-100914	10/9/2014	34.95 - 44.95	41.30	NE	<0.01 UJ	0.039		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.0688
T-12	T12-ROX-011912	1/19/2012	46.46 - 72.46	41.0	NE	<0.005	1.51		<0.005	0.0062	0.0022 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.285
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	1.48		<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	1.88
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05 UJ	1.64		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005		0.573
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	1.71		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	1.73
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	2.03		<0.0795 U	0.0056 J	0.0036 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13 UJ	0.426
	T12-ROX-041513	4/15/2013		44.99	NE	<0.1 UJ	1.61		<0.05	<0.05	0.0595	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	1.03
	T12-ROX-071613	7/16/2013		42.33	NE	<0.01	1.65		<0.005	0.0069 J	0.003 J J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0025 J J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.45
	T12-ROX-101513	10/15/2013		43.73	NE	0.0803	2.02		0.0246 J	0.0098 J	0.0038 J	<0.025	<0.025	<0.005	<0.005	<0.01	<0.005	<0.01	<0.025	<0.025	<0.005	<0.01	<0.01	<0.0025	<0.13	1.82
	T12-ROX-012414	1/24/2014		45.26	NE	<0.01	2.48		<0.005	0.0083	0.0029 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.002	<0.0005	<0.025	0.518
	T12-ROX-041514	4/15/2014		46.72	NE	<0.01 UJ	2.07		0.017	0.0062	0.0024 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0018 J	<0.001	<0.002	<0.002	<0.0005	<0.025	0.376
	T12-ROX-070814	7/8/2014		45.13	NE	0.0658 J	2.14		0.0094	0.0096	0.0039 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0024 J	0.0022	<0.002	<0.002	<0.0005	<0.025 UJ	0.614
	T12-ROX-101714	10/17/2014	46.46 - 72.46	44.40	NE	<0.1	1.83		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.05	<0.01	<0.02	<0.02	<0.005	<0.25	1.75

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						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-01	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0032	0.000079 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0031	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	0.0001 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-102612	10/26/2012		41.22	NE																				
	MW1-ROX-121712	12/17/2012		41.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0012	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0049	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0013	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0018	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-070914	7/9/2014		42.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0035	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW1-ROX-100614	10/6/2014	48.80 - 58.80	41.1	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00082 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
MW-02	MW2-ROX-011612	1/16/2012	49.87 - 59.87	38.89	NE	<0.025	<0.025		<0.025		0.0832	<0.025	<0.005	0.0859	0.0993	0.0375	<0.025	<0.025	<0.005		0.388	0.162	<0.025	0.857	0.056	0.913
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.025	<0.025		<0.025		0.0886	<0.025	<0.005	0.0497	0.119	0.0445	<0.025	<0.025	<0.005		0.413	0.154	<0.025	1.14	0.0797	1.22
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.005	<0.005		<0.005		0.0818	<0.005	<0.001	0.0554	0.116	0.0374	<0.005	<0.005	<0.001		0.338	0.135	<0.005	1.27	0.0906	1.34
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.025	<0.025		<0.025		0.0764	<0.025	0.0115	0.0821	0.104	0.0216	<0.025	<0.025	<0.005		0.299	0.129	<0.025	0.878	0.052	0.93
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.01	<0.01		<0.01		0.0879	<0.01	<0.002	0.0768	0.121	0.0093	<0.01	<0.01	<0.002		0.219	0.105	<0.01	0.685	0.0287	0.713
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.025	<0.025		<0.025		0.085	<0.025	<0.005	0.0578	0.11	0.0073	<0.025	<0.025	<0.005		0.338	0.155	<0.025	1.01	0.0454	1.05
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.005	<0.005		<0.005 UJ		0.0931	<0.005	0.0062	0.114	0.127	0.11	<0.005	<0.005	<0.001		0.522	0.175	<0.005 UJ	1.88	0.174	1.88
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.005	<0.005		0.0079		0.0983	<0.005	0.0032	0.0939	0.132	0.0164	<0.005	<0.005	<0.001		0.368	0.174	0.0768	0.912	0.0519	0.912
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.005	<0.005		<0.005		0.102	<0.005	<0.001	0.0663	0.133	0.0099	<0.005	<0.005	<0.001		0.264	0.156	<0.005	0.486	0.0304	0.516
	MW2-ROX-041014	4/10/2014		44.66	NE	<0.005	<0.005		<0.005		0.0816	<0.005	<0.001	0.0474	0.106	0.0072	<0.005	<0.005	<0.001		0.181	0.121	<0.005	0.444	0.0275	0.472
	MW2-ROX-071414	7/14/2014		43.13	NE	<0.005	<0.005		<0.005		0.0966 J	<0.005	<0.001	0.0792 J	0.112 J	0.0113 J	<0.005	<0.005	<0.001		0.341 J	0.15 J	<0.005	0.764	0.0845	0.804
	MW2-ROX-101014	10/10/2014	49.87 - 59.87	42.49	NE	<0.01	<0.01		<0.01 UJ		0.0675	<0.01	<0.002	0.0512	0.0867	0.006	<0.01	<0.01	<0.002		0.135	0.0901	<0.01	0.26	0.0183	0.278
MW-03	MW3-ROX-011612	1/16/2012	34.67 - 44.67	24.93	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0039	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0027	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0008 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.007	<0.001	<0.001	<0.001
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.005	<0.005		<0.005 UJ		0.0049 J	<0.005	0.0035	<0.005	0.0055	0.0013	<0.005	<0.005	<0.001		0.0013 J	<0.005	<0.005 UJ	0.0028	<0.001	0.0028
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00075 J	<0.005	0.0021 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.0197	0.0011	<0.001	0.0011
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-071114	7/10/2014		29.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW3-ROX-100914	10/9/2014	34.67 - 44.67	28.18	NE	<0.005	<0.005		<0.005		0.0004 J	<0.005	0.0031	<0.005	0.00053 J	0.00046 J	<0.005	<0.005	<0.001		0.0012 J	<0.005	<0.005 UJ	0.00095 J	<0.001	<0.00095 U

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-04	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	0.0017 J	<0.005		<0.005		0.0061	<0.005	<0.001	<0.0001	0.0061	0.0283	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0148	0.0025	0.0173
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	<0.005		<0.005		0.0038 J	<0.005	0.0174	<0.0001	<0.005	0.0255	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.016	0.003	0.0189
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.005	<0.005		<0.005		0.0036 J	<0.005	0.0162	<0.0001	0.0043 J	0.0252	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0151	0.0031	0.0182
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.005	<0.005 UJ		<0.005		0.0061	<0.005	0.015	<0.0001	0.0071	0.0418	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0221	0.0042	0.0262
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.005	<0.005 UJ		<0.005		0.0063	<0.005	0.0154	<0.0001	0.0072	0.0427	<0.005	<0.005	<0.001		0.00068 J	0.0057	<0.005	0.0214	0.0043	0.0257
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.01	<0.01		<0.01		0.0029 J	<0.01	0.0324	<0.01	0.0033 J	0.0175	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0114	<0.002	0.0114
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.005	<0.005		<0.005		0.0012 J	<0.005	0.0654	<0.005	0.0026 J	0.0075	<0.005	<0.005	<0.001		0.0019 J	0.0024 J	<0.005	0.0056	<0.001	0.0056
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.005	<0.005		<0.005		0.0014 J	<0.005	0.0681	<0.005	0.003 J	0.0083	<0.005	<0.005	<0.001		0.0019 J	0.0026 J	<0.005	0.006	<0.001	0.006
	MW4-ROX-030413	3/4/2013		40.20	NE	<0.5	<0.5		<0.5		<0.5	<0.5	0.112	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	<0.1	<0.1	<0.1
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.01	<0.01		<0.01		<0.01	<0.01	0.112	<0.01	<0.01	0.0057	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0052	<0.002	0.0062
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.125	<0.005	0.004 J	0.0076	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0073	0.0011	0.0084
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.005	<0.005		0.0041 J		0.0067	<0.005	0.0559	<0.005	0.008	0.0381	<0.005	<0.005	0.00085 J		0.0012 J	<0.005	0.0392 J	0.0302	0.0052	0.0353
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.05 UJ	<0.05		<0.05		<0.05	<0.05	0.0333 J	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01		<0.05	<0.05	<0.05 UJ	<0.01	<0.01	0.0058 J
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.005	<0.005		<0.005		0.0021 J	<0.005	<0.001	<0.005	0.0026 J	0.0037	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0132	0.0049	0.0181
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.005	<0.005		<0.005		0.00059 J	<0.005	<0.001	<0.005	0.00081 J	0.00099 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0027	0.00039 J	0.0031
	MW4-ROX-071614	7/16/2014		40.18	NE	<0.005	<0.005		<0.005		<0.05	<0.005	<0.001	<0.05	<0.05	0.006 J	<0.005	<0.005	<0.001		<0.05	<0.05	<0.005	<0.01	<0.01	0.0055 J
	MW4-ROX-101614	10/16/2014	46.06 - 56.06	39.49	NE	<0.025	<0.025		<0.025		0.0026 J	<0.025	0.0379	<0.025	<0.025	<0.005	<0.025 UJ	<0.025	<0.005		0.0037 J	<0.025	<0.025 UJ	0.0086	0.0022 J	0.0108
MW-05	MW5-ROX-011712	1/17/2012	33.97 - 43.97	24.76	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0187	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.00081 U
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.005	<0.005		<0.005		0.001 J	<0.005	0.022	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.005	<0.005 UJ		<0.005		0.0066	<0.005	0.013	0.00032	0.0018 J	0.0032	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.008	0.0017	0.0097
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.005	<0.005		<0.005		0.002 J	<0.005	0.0219	<0.005	<0.005	0.0018	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0018	<0.001	0.0018
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.005	<0.005		<0.005		0.00086 J	<0.005	0.0295	<0.005	<0.005	0.0008 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.005	<0.005		<0.005		0.00085 J	<0.005	0.0427	<0.005	<0.005	0.002	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.001	<0.001	0.0014
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.005	<0.005		<0.005		0.0268	<0.005	0.0121	<0.005	0.0132	0.0029	<0.005	<0.005	0.0018		<0.005	<0.005	<0.005 UJ	0.0079	0.0018	0.0097
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.005	<0.005		<0.005		0.0045 J	<0.005	0.0221	<0.005	<0.005	0.002	<0.005	<0.005	<0.001		<0.005	<0.005	0.0129	0.0044	0.00097 J	0.0054
	MW5-ROX-011714	1/17/2014		29.59	NE	<0.005	<0.005		<0.005		0.00097 J	<0.005	0.0282	<0.005	<0.005	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0081	0.0045	0.0127
	MW5-ROX-041014	4/10/2014		30.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0344	0.001 J	<0.005	0.0013	<0.005	<0.005	<0.001		0.00052 J	<0.005	<0.005	0.0013	0.00095 J	0.0023
	MW5-ROX-071414	7/14/2014		28.59	NE	<0.005	<0.005		<0.005		0.00049 J	<0.005	<0.001	<0.005	<0.005	0.0016	<0.005	<0.005	<0.001		0.00033 J	<0.005	<0.005	0.002	0.00073 J	0.0027
	MW-5-ROX-100914	10/9/2014	33.97 - 43.97	27.75	NE	<0.005	<0.005		<0.005 UJ		0.0012 J	<0.005	0.019	<0.005	<0.005	0.0015	<0.005	<0.005	<0.001		0.00058 J	<0.005	<0.005	0.0027	0.0012 J	0.0039
MW-06A	MW6A-ROX-011712	1/17/2012	34.83 - 44.83	26.74	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0185	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0019	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0027	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0025	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0131	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0132	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0108	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0103	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00086 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-071014	7/10/2014		30.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0148	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6A-ROX-100814	10/8/2014	34.83 - 44.83	29.84	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0082	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
				Screening Values (mg/L)			0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-06B	MW6B-ROX-011712	1/17/2012	64.05 - 69.05	26.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0049	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0115	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0122	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0091	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0166	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0132	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0113	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0069	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-071014	7/10/2014		30.81	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0054	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6B-ROX-100814	10/8/2014	64.05 - 69.05	29.87	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0031	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-06C	MW6C-ROX-011712	1/17/2012	84.95 - 89.95	26.50	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	0.0012 J	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.00075 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00068 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-071014	7/10/2014		30.60	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6C-ROX-100814	10/8/2014	84.95 - 89.95	29.67	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00057 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-06D	MW6D-ROX-011712	1/17/2012	104.72 - 109.72	26.33	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00016 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00061 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00094 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-071014	7/10/2014		31.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-100814	10/8/2014	104.72 - 109.72	29.53	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00054 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW6D-ROX-100814-DUP	10/8/2014		29.53	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00062 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-07	MW7-ROX-011812	1/18/2012	42.92 - 52.92	38.10	NE	<0.005	<0.005		<0.005		0.0101	<0.005	0.0022	0.0134	0.0135	0.158	<0.005	<0.005	<0.001		0.148	0.0341	<0.005	0.137	0.0527	0.19
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.005	<0.005		<0.005		0.01	<0.005	0.0024	0.0138	0.0138	0.156	<0.005	<0.005	<0.001		0.146	0.0332	<0.005	0.134	0.051	0.184
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	0.0158	<0.5	0.101	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	<0.1	<0.1	<0.1
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.05	<0.05		<0.05		<0.05	<0.05	<0.01	0.0089	0.0102 J	0.0629	<0.05	<0.05	<0.01		0.1	0.021 J	<0.05	0.12	0.0486	0.169
	MW7-ROX-103012	10/30/2012		41.23	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-011513	1/15/2013		42.21	NE	<20	<20		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<20	<20		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4
	MW7-ROX-041013	4/10/2013		42.70	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.005	<0.005		<0.005		0.0096 J	<0.005	0.0031 J	0.0185 J	0.0173 J	0.289 J	<0.005	<0.005	<0.001		0.117 J	0.0264 J	0.0094 J	0.455 J	0.183 J	0.639 J
	MW7-ROX-101613	10/16/2013		40.64	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW7-ROX-013014	1/30/2014		42.94	NE	<13	<13		<13		<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW7-ROX-041614	4/16/2014		43.79	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25	<25	<5		<25	<25	<25	<5	<5	<5
	MW7-ROX-071614	7/16/2014		42.05	NE	<0.005	<0.005		<0.005		0.0127 J	<0.005	<0.001	0.0165 J	0.0197 J	0.224 J	<0.005	<0.005	<0.001		0.143 J	0.0324 J	<0.005	0.48 J	0.187 J	0.667 J
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.005	<0.005		<0.005		0.0131 J	<0.005	<0.001	0.0141 J	0.0194 J	0.222 J	<0.005	<0.005	<0.001		0.142 J	0.0318 J	<0.005	0.465 J	0.181 J	0.647 J
	MW7-ROX-101614	10/16/2014	42.92 - 52.92	41.31	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25 UJ	<25	<5		<25	<25	<25 UJ	<5	<5	<5
	MW7-ROX-101614-DUP	10/16/2014		41.31	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25 UJ	<25	<5		<25	<25	<25 UJ	<5	<5	<5
MW-08	MW8-ROX-011812	1/18/2012	33.60 - 43.60	29.15	NE	<0.005	<0.005		<0.005		0.0162	<0.005	1.41 J	0.0239	0.0377	<2	<0.005	<0.005	<0.001		0.163	0.061	<0.005	0.574	0.219	0.794
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.5	<0.5		<0.5		<0.5	<0.5	4.15	0.0186	<0.5	1.55	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.978	0.37	1.35
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.5	<0.5		<0.5		<0.5	<0.5	4.07	0.0188	<0.5	1.52	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.939	0.381	1.32
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.1	<0.1		<0.1		<0.1	<0.1	0.878	0.0164	0.0191 J	0.781	<0.1	<0.1	<0.02		0.104	0.0299 J	<0.1	0.623	0.246	0.868
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.05	<0.05		<0.05		<0.05	<0.05	0.885	0.0164	0.0176 J	0.729	<0.05	<0.05	<0.01		0.0921	0.0265 J	<0.05	0.598	0.235	0.833
	MW8-ROX-103012	10/30/2012		32.32	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	MW8-ROX-011513	1/15/2013		33.30	NE	<10	<10		<10		<10	<10	<2	<10	<10	2.09	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-041013	4/10/2013		33.77	NE	<25	<25		<25		<25	<25	<5	<25	<25	<5	<25	<25	<5		<25	<25	<25	<5	<5	<5
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.005	<0.005		<0.005		0.0173	<0.005	0.197	0.0335	0.0374	0.348	<0.005	<0.005	<0.001		0.199	0.0598	<0.005 UJ	1.01	0.361	1.3
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.005	<0.005		<0.005		0.0174	<0.005	0.187	0.0347	0.0383	0.341	<0.005	<0.005	<0.001		0.203	0.0613	<0.005 UJ	0.818 J	0.364	1.05
	MW8-ROX-101613	10/16/2013		31.59	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	MW8-ROX-013014	1/30/2014		34.02	NE	<13	<13		<13		<13	<13	1.92 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<13	<13		<13		<13	<13	1.99 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5
	MW8-ROX-041614	4/16/2014		34.73	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	MW8-ROX-071614	7/16/2014		33.01	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0266 J	<0.005 UJ	0.392 J	0.0598 J	0.0606 J	0.108 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.226 J	0.0904 J	<0.005 UJ	0.377 J	0.141 J	0.518 J
	MW8-ROX-101614	10/16/2014	33.60 - 43.60	32.23	NE	<5	<5		<5		<5	<5	1.19	<5	<5	<1	<5 UJ	<5	<1		<5	<5	<5 UJ	<1	<1	<1

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
				Screening Values (mg/L)			0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-09	MW9-ROX-011612	1/16/2012	46.45 - 56.45	39.50	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000062 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-050312	5/3/2012		41.03	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001		<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-070813	7/8/2013		42.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-070914	7/9/2014		44.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW9-ROX-100714	10/7/2014	46.45 - 56.45	43.52	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
MW-10	MW10-ROX-011612	1/16/2012	44.43 - 54.43	39.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000047 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.000052 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW10-ROX-102612	10/26/2012		43.08	NE																					
	MW10-ROX-121712	12/17/2012		43.08	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.00058 J
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.016	<0.001	<0.001	<0.001
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.005	<0.005	<0.02	<0.025		<0.005	<0.025	<0.002	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.005	<0.005		<0.005	1.9	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-011514	1/15/2014		44.42	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-070914	7/9/2014		44.35	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW10-ROX-100714	10/7/2014	44.43 - 54.43	43.58	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
MW-11	MW11-ROX-011712	1/17/2012	41.66 - 51.66	37.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001		<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00012	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-070914	7/9/2014		41.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW11-ROX-100714	10/7/2014	41.66 - 51.66	40.89	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001

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CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			
MW-12	MW12-ROX-011712	1/17/2012	41.92 - 51.92	37.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.00089 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-070914	7/9/2014		41.97	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW12-ROX-100614	10/6/2014	41.92 - 51.92	40.98	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
MW-13	MW13-ROX-012012	1/20/2012	25.57 - 35.57	24.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0066 J	0.00021	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0083	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		<0.005 UJ	<0.005 UJ	0.0133 J	<0.0013 U	<0.005 UJ	<0.001 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ		<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.001 UJ	<0.001 UJ	<0.001 UJ
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0082	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	0.0094	<0.005	0.00064 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	0.0072	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.008	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-041114	4/11/2014		30.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0062	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-070714	7/7/2014		28.49	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0091	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW13-ROX-101014	10/10/2014	25.57 - 35.57	27.48	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	0.0045	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.0011
MW-14	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.005	<0.005		<0.005		0.0104	<0.005	<0.001	0.00099	0.0078	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0016	0.00041 J	0.002
	MW14-ROX-080312	8/3/2012		NM	NE	<0.005	<0.005		<0.005		0.0173	<0.005	<0.001	0.0013	0.0137	0.00093 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0033	0.00061 J	0.0039
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005	<0.005		<0.005		0.0161	<0.005	<0.001	<0.005	0.0121	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0024	<0.001	0.0024
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005	<0.005		<0.005		0.021	<0.005	<0.001	<0.005	0.0162	0.00097 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0026	<0.001	0.003
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.005	<0.005		<0.005		0.0346	<0.005	<0.001	<0.005	0.0206	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0038	<0.001	0.0043
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.005	<0.005 UJ		<0.005		0.0168	<0.005	<0.001	<0.005	0.0109	0.00059 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0026	<0.001	0.0029
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.005	<0.005		<0.005		0.0011 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.00088 J	0.0011 J	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-012914	1/29/2014		33.67	NE	<0.005	<0.005		<0.005		0.0036 J	<0.005	<0.001	<0.005	0.002 J	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-041114	4/11/2014		34.30	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-070714	7/7/2014		32.82	NE	<0.005	<0.005		<0.005		0.00073 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW14-ROX-101414	10/14/2014	33.42 - 43.42	31.65	NE	<0.005	<0.005		<0.005 UJ		0.00043 J	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.00041 J
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-071014	7/10/2014		43.15	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW16-ROX-100714	10/7/2014	37.06 - 47.06	42.27	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.25	<0.25		<0.25		0.126 J	<0.25	<0.05	0.396	0.22 J	10.5	<0.25	<0.25	<0.05		1.23	0.288	<0.25 UJ	7.56	3.73	11.3
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.25	<0.25		<0.25		0.124 J	<0.25	<0.05	0.377	0.234 J	9.06	<0.25	<0.25	<0.05		1.26	0.291	<0.25 UJ	6.96	3.52	10.5
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.005	<0.005		<0.005		0.159 J	0.0124 J	<0.001	0.286 J	0.29 J	6.14	<0.005	<0.005	<0.001		0.931	0.379 J	<0.005	5.15	2.64	7.79
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.005	<0.005		<0.005 UJ		0.131	0.0102	<0.001	0.345	0.242	3.92	<0.005	<0.005	<0.001		0.864	0.309	<0.005 UJ	4.13	2.26	6.39
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.005	<0.005		<0.005 UJ		0.133	0.0103	<0.001	0.362	0.245	3.57	<0.005	<0.005	<0.001		0.754	0.311	<0.005 UJ	3.83	2.05	5.88
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.005	<0.005 UJ		<0.005		0.137	0.0101	<0.001	0.47	0.244	6.02	<0.005	<0.005	<0.001		1.37	0.357	<0.005	7.46	3.48	10.9
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.005	<0.005 UJ		<0.005		0.136	0.0084	<0.001	0.445	0.243	6.32	<0.005	<0.005	<0.001		1.43	0.343	<0.005	7.75	3.65	11.4
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.005	<0.005		0.0082		0.169	0.007	<0.001	0.287	0.287	5.33	<0.005	<0.005	<0.001		1.3	0.298	<0.005	5.65	2.65	8.29
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.005	<0.005		0.0088		0.169	0.007	<0.001	0.262	0.286	5.71	<0.005	<0.005	<0.001		1.37	0.398	<0.005	6.01	2.81	8.83
	MW22-ROX-041014	4/10/2014		43.15	NE	<0.005	<0.005		<0.005		0.157	<0.005	<0.001	0.334	0.254	5.95	<0.005	<0.005	<0.001		1.1	0.384	<0.005	6.85	3.38	10.2
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.005	<0.005		<0.005		0.138	0.0082	<0.001	0.28	0.235	5.52	<0.005	<0.005	<0.001		1	0.35	<0.005	6.23	3.12	9.35
	MW22-ROX-071414	7/14/2014		41.85	NE	<0.005	<0.005		<0.005		0.153 J	<0.005	<0.001	0.282 J	0.205 J	3.14	<0.005	<0.005	<0.001		0.353 J	0.262 J	<0.005	3.78	1.85	5.64
	MW22-ROX-101014	10/10/2014	37.88 - 47.88	41.43	NE	<0.05	<0.05		<0.05 UJ		0.0661	<0.05	<0.01	0.202	0.112	2.3	<0.05	<0.05	<0.01		0.688	0.207	<0.05	3.08	1.74	4.82
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.0014	<0.005	<0.005	<0.001		0.00051 J	<0.005	<0.005	0.0021	0.0009 J	0.003
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-071114	7/10/2014		42.97	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	MW24-ROX-100814	10/8/2014	38.89 - 48.89	42.16	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-25	MW25-ROX-102114	10/21/2014	35.59 - 45.59	36.44	NE	<10	<10		<10		<10	<10	<2	<10	<10	2.65	<10	<10	<2		<10	<10	<10	<2	<2	0.753 J
MW-26	MW26-ROX-102114	10/21/2014	38.15 - 48.15	39.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.002	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-27	MW27-ROX-102114	10/21/2014	39.79 - 49.79	41.57	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
MW-28	MW28-ROX-102114	10/21/2014	33.61 - 43.61	36.44	NE	<0.005	<0.005		<0.005		0.00075 J	<0.005	<0.001	<0.005	<0.005	0.0011	<0.005	<0.005	<0.001		0.0036 J	0.00059 J	<0.005	0.0036	0.0051	0.0087
P-54	P54-ROX-011712	1/17/2012	38.00 - 63.00	37.17	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.000089 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-103012	10/30/2012		40.70	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-041013	4/10/2013		41.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-050313	5/3/2013		41.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-071113	7/11/2013		39.07	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P54-ROX-100813	10/8/2013		39.94	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-011514	1/15/2014		42.20	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-040914	4/9/2014		42.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-071114	7/10/2014		41.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P54-ROX-100814	10/8/2014	38.00 - 63.00	40.88	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
P-55	P55-ROX-011912	1/19/2012	39.82 - 64.82	41.09	NE	<0.005	<0.005		<0.005		0.0105 J	<0.005	<0.001	0.0197	0.0173	0.0337	<0.005	<0.005	<0.001		0.017	0.009	<0.005	0.205	0.0663	0.271
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.005	<0.005		<0.005		0.0105 J	<0.005	<0.001	0.0169	0.0176	0.0359	<0.005	<0.005	<0.001		0.0179	0.0097	<0.005	0.21	0.0649	0.275
	P55-ROX-050912	5/9/2012		42.44	NE	<0.005	<0.005		<0.005		0.0392	<0.005	<0.001	0.0271	0.0699	0.227	<0.005	<0.005	<0.001		0.158	0.0368	<0.005	0.885	0.112	0.97
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.05	<0.01	0.276	<0.25		0.0678	<0.25	<0.02	0.079 J	0.14	0.189	<0.05	<0.01	<0.05	0.183	0.039 J	0.026 J	<0.1	0.279	0.347	
	P55-ROX-012113	1/21/2013		43.60	NE	<0.005	<0.005		<0.005		0.0937	<0.005	0.002	0.12	0.206	0.262	<0.005	<0.005	<0.001		0.046	0.0312	<0.005	0.356	0.382	0.738
	P55-ROX-041513	4/15/2013		43.63	NE	<0.01	<0.01		<0.01		0.068	<0.01	<0.002	0.0974 J	0.148	0.143	<0.01	<0.01	<0.002		0.0241	0.0229	<0.01	0.235	0.362	0.597
	P55-ROX-071613	7/16/2013		40.06	NE	<0.005	<0.005 UJ		<0.005	0.72	0.0884	<0.005	<0.001	0.0841	0.175	0.343	<0.005	<0.005	<0.001		0.073	0.0559	<0.005 UJ	0.535	0.558	1.11
	P55-ROX-101013	10/10/2013		41.67	NE	<0.005	<0.005		<0.005		0.0851	<0.005	0.001	0.121	0.167	0.601	<0.005	<0.005	<0.001		0.151	0.062	<0.005	0.739	0.639	1.38

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)		0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-56	P56-ROX-011912	1/19/2012	40.82 - 65.82	41.81	NE	<0.005	<0.005		<0.005		0.0787 J	<0.005	<0.001	0.0596	0.0697	0.023	<0.005	<0.005	<0.001		0.0229	0.0077	<0.005	0.202	0.0161	0.218
	P56-ROX-050812	5/8/2012		43.09	NE	<0.005	<0.005		<0.005		0.0876	<0.005	<0.001	0.0667	0.111	0.197	<0.005	<0.005	<0.001		0.312	0.0708	<0.005	1.37	0.197	1.53
	P56-ROX-080612	8/6/2012		43.60	NE	<0.025	<0.025		<0.025 UJ		0.0442	<0.025	<0.005	0.0197	0.0439	0.0109	<0.025 UJ	<0.025 UJ	<0.005		0.0131 J	0.005 J	<0.025 UJ	0.11	0.0083	0.118
	P56-ROX-103112	10/31/2012		44.80	NE	<0.005	<0.005		<0.005		0.0752	<0.005	<0.001	0.167	0.105	0.187	<0.005	<0.005	<0.001		0.387	0.0901	<0.005	1.62	0.144	1.73
	P56-ROX-011713	1/17/2013		45.65	NE	<0.025	<0.025		<0.025		0.0398	<0.025	<0.005	0.0322	0.0456	0.0119	<0.025	<0.025	<0.005		0.0172 J	0.0092 J	<0.025	0.0745	<0.005	0.0745
	P56-ROX-041213	4/12/2013		46.12	NE	<0.01	<0.01		<0.01		0.0581	<0.01	<0.002	0.0964 J	0.0805	0.0799	<0.01	<0.01	<0.002		0.27	0.0486	<0.01	1	0.0243	1.03
	P56-ROX-071513	7/15/2013		43.25	NE	<0.005	<0.005		<0.005		0.0968	<0.005	<0.001	0.316	0.145	0.311	<0.005	<0.005	<0.001		0.551	0.134	<0.005	2.67	0.21	2.85
	P56-ROX-101013	10/10/2013		44.48	NE	<0.005	<0.005		<0.005		0.0822	<0.005	0.00058 J	0.156	0.105	0.157	<0.005	<0.005	<0.001		0.33	0.0714	<0.005	1.7	0.0617	1.76
	P56-ROX-012214	1/22/2014		46.35	NE	<0.005	<0.005		<0.005		0.0399	<0.005	<0.001	0.0566	0.0426	0.0263	<0.005	<0.005	<0.001		0.074	0.0172	<0.005	0.224	0.0093	0.233
	P56-ROX-041414	4/14/2014		47.32	NE	<0.005	<0.005		<0.005		0.0781	<0.005	<0.001	0.0836	0.0951	0.0669	<0.005	<0.005	<0.001		0.205	0.0472	<0.005	0.742	0.0156	0.758
	P56-ROX-070814	7/8/2014		45.97	NE	<0.005	<0.005		<0.005		0.106 J	<0.005	<0.001	0.156 J	0.133 J	0.288 J	<0.005	<0.005	<0.001		0.487 J	0.166 J	<0.005	2.04 J	0.122 J	2.09 J
	P56-ROX-101314	10/13/2014	40.82 - 65.82	45.05	NE	<0.005	<0.005		<0.005 UJ		0.0645	<0.005	<0.001	0.0679	0.0709	0.0183	<0.005	<0.005	<0.001		0.0657	0.0194	<0.005	0.17	0.0066	0.176
P-57	P57-ROX-021312	2/13/2012	40.46 - 65.46	42.13	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	0.271 J	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	0.502	<0.5	0.502
	P57-ROX-050712	5/7/2012		42.92	NE	<0.5	<0.5		<0.5		<0.5	<0.5	0.453	0.0894	<0.5	<0.1	<0.5	<0.5	<0.1		0.632	0.159 J	<0.5	0.928	0.0563 J	0.984
	P57-ROX-080612	8/6/2012		43.53	NE	<0.25	<0.25		<0.25 UJ		<0.25	<0.25	0.238	0.119	<0.25	0.0577	<0.25	<0.25	<0.05		0.506	0.123 J	<0.25 UJ	0.74	0.0328 J	0.773
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.005	<0.005		<0.005 UJ		0.0432	<0.005	0.212	0.115	0.0519	0.0558	<0.005	<0.005	<0.001		0.505 E	0.137	<0.005 UJ	0.692	0.0348	0.727
	P57-ROX-110512	11/5/2012		44.98	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	1.53 J	<2.5	<0.5	<2.5	<2.5	<0.5		0.577 J	<2.5	<2.5	1.03	<0.5	1.03
	P57-ROX-012913	1/29/2013		45.92	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	0.331 J	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P57-ROX-041113	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		0.494 J	<2.5	<2.5	<0.5	<0.5	<0.5
	P57-ROX-071613	7/16/2013		43.38	NE	<0.005	<0.005 UJ		<0.005		0.0698 J	<0.005	0.112 J	0.203 J	0.0802 J	0.202 J	<0.005	<0.005	<0.001		<5	0.129 J	<0.005 UJ	1.81	0.256 J	2.01
	P57-ROX-101413	10/14/2013		44.38	NE	<0.005	<0.005		<0.005		0.0539	<0.005	0.107	0.206	0.0586	0.0421	<0.005	<0.005	<0.001		0.763 J	0.12	<0.005	0.468	0.0206	0.489
	P57-ROX-020314	2/3/2014		46.57	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P57-ROX-041514	4/15/2014		46.70	NE	<0.005	<0.005		0.0062		0.0492	<0.005	0.0563	0.272	0.0585	0.0248	0.0015 J	<0.005	<0.001		0.503 E J	0.114	<0.005	0.296	0.0143	0.311
	P57-ROX-070814	7/8/2014		45.95	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0656 J	<0.005 UJ	<0.001 UJ	0.128 J	0.0605 J	0.154 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.375 J	0.0913 J	<0.005 UJ	1.46	0.237	1.7
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0689 J	<0.005 UJ	<0.001 UJ	0.139 J	0.0633 J	0.16 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.392 J	0.0954 J	<0.005 UJ	1.56	0.234	1.79
	P57-ROX-101414-DUP	10/14/2014	40.46 - 65.46	45.00	NE	<10	<10		<10 UJ		<10	<10	<2	<10	<10	0.849 J	<10	<10	<2		1.18 J	<10	<10	2.37	0.949 J	3.32 J
	P57-ROX-101414	10/14/2014		45.00	NE	<10	<10		<10 UJ		<10	<10	<2	2.05 J	<10	2.65	<10	<10	<2		2.37 J	<10	<10	5.79	2.1	7.89 J
P-58	P58-ROX-011912	1/19/2012	40.21 - 65.21	39.73	NE	<0.005	<0.005		0.0097		0.108 J	<0.005	0.0082	0.212	0.129 J	0.155 J	<0.005	<0.005	<0.001			0.14 J	0.0408 J	0.679	0.108	0.787
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.005	<0.005		<0.005		0.0832 J	<0.005	0.0101 J	0.191 J	0.0993 J	0.119 J	<0.005	<0.005	<0.001		<5	0.11	<0.005 UJ	<1	<1	<1
	P58-ROX-050712	5/7/2012		40.90	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	0.112 J	0.106 J	0.137	<0.5	<0.5	<0.1		0.776	0.108 J	<0.5	0.666	0.0982 J	0.764
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	0.0697 J	0.108 J	0.145	<0.5	<0.5	<0.1		0.757	0.109 J	<0.5	0.636	0.0968 J	0.733
	P58-ROX-080612	8/6/2012		41.63	NE	<0.1	<0.1		<0.1 UJ		0.0649 J	<0.1	<0.02	0.142	0.0909 J	0.117	<0.1	<0.1	<0.02		0.705	0.0955 J	<0.1 UJ	0.652	0.0976	0.749
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.05	<0.05		<0.05		0.0718	<0.05	<0.01	0.15	0.0996	0.128	<0.05	<0.05	<0.01		0.737	0.102	<0.05	0.656	0.104	0.759
	P58-ROX-110612	11/6/2012		43.09	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	0.124	<0.5	<0.5	<0.1		0.658	0.108 J	<0.5	0.544	0.0807 J	0.624
	P58-ROX-121012	12/10/2012		43.09	NE																					
	P58-ROX-012213	1/22/2013		44.21	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	0.728 J
	P58-ROX-041113	4/11/2013		44.40	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		0.926 J	<10	<10	<2	<2	<2
	P58-ROX-071613	7/16/2013		41.49	NE	<0.005	<0.005 UJ		<0.005		0.101	<0.005	<0.001	0.234	0.131	0.147	<0.005	<0.005	<0.001		0.634 J	0.13	<0.005 UJ	0.723	0.12	0.843
	P58-ROX-101413	10/14/2013		42.19	NE	<0.005	<0.005		<0.005		0.0999	0.0055	0.0015	0.234	0.135	0.2	<0.005	<0.005	<0.001		1.17 J	0.131	<0.005	0.74	0.112	0.852
	P58-ROX-020314	2/3/2014		44.66	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P58-ROX-041514	4/15/2014		45.66	NE	<0.005	<0.005		<0.005		0.0777 J	<0.005	<0.001	0.277 J	0.104 J	0.127 J	<0.005	<0.005	<0.001		0.53 E J	0.0992 J	<0.005	0.552 J	0.0908 J	0.643 J
	P58-ROX-071814	7/18/2014		43.80	NE	<10	<10		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2
	P58-ROX-101514	10/15/2014	40.21 - 65.21	43.14	NE	<2.5	<2.5		<2.5		1.43 J	<2.5	<0.5	<2.5	0.781 J	<0.5	<2.5	<2.5	<0.5		0.72 J	0.453 J	<2.5	<0.5	0.253 J	0.718

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						VOCs																			
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
					Screening Values (mg/L)		0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			
P-59	P59-ROX-011912	1/19/2012	47.91 - 72.91	42.88	NE	<0.005	<0.005		<0.005		0.0713	<0.005	<0.001	0.18	0.128	0.896	<0.005	<0.005	<0.001		0.483 J	0.198	<0.005	3.03	0.587	3.62
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.005	<0.005		<0.005		0.0733	<0.005	<0.001	0.183	0.133	0.931	<0.005	<0.005	<0.001		0.536	0.203	<0.005	3.21	0.587	3.8
	P59-ROX-050912	5/9/2012		44.11	NE	<0.25	<0.25		<0.25		0.0585 J	<0.25	<0.05	0.0925	0.123 J	2.35	<0.25	<0.25	<0.05		0.67	0.171 J	<0.25	4.56	1.08	5.64
	P59-ROX-080212	8/2/2012		44.07	NE	<0.1	<0.1		<0.1		0.0452 J	<0.1	<0.02	0.0886	0.0974 J	0.506	<0.1	<0.1	<0.02		0.563	0.158	<0.1	4.35	0.376	4.73
	P59-ROX-110212	11/2/2012		45.98	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	0.105 J	1.09	<0.5	<0.5	<0.1		0.558	0.154 J	<0.5	4.49	0.686	5.17
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	0.111 J	1.1	<0.5	<0.5	<0.1		0.592	0.167 J	<0.5	4.68	0.721	5.4
	P59-ROX-013013	1/30/2013		46.60	NE	<0.25	<0.25		<0.25		0.0455 J	<0.25 UJ	<0.05 UJ	0.376	0.085 J	0.296	<0.25	<0.25	<0.05		0.563	0.0491 J	<0.25	4.19	0.264	4.45
	P59-ROX-041213	4/12/2013		46.95	NE	<0.25	<0.25		<0.25		0.062 J	<0.25	<0.05	0.664	0.136 J	0.523	<0.25	<0.25	<0.05		0.946	<0.25	<0.25	6.52	0.646	7.16
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.25	<0.25		<0.25		0.0543 J	<0.25	<0.05	0.547	0.117 J	0.463	<0.25	<0.25	<0.05		0.843	<0.25	<0.25	5.89	0.591	6.48
	P59-ROX-071613	7/16/2013		44.13	NE	<0.005	<0.005 UJ		<0.005		0.074 J	<0.005	<0.001	0.215 J	0.149 J	1.03	<0.005	<0.005	<0.001		0.784	0.219	<0.005 UJ	5.76	0.431	6.19
	P59-ROX-101013	10/10/2013		45.50	NE	<0.005	<0.005		<0.005		0.086	<0.005	0.0012	0.285	0.176	2.89	<0.005	<0.005	<0.001		1.14	0.273	<0.005	7.47	1.28	8.75
	P59-ROX-020314	2/3/2014		47.35	NE	<0.1	<0.1		<0.1		0.0409 J	<0.1	<0.02	0.0321 J	0.0824 J	0.66	<0.1	<0.1	<0.02		0.621	0.193	<0.1	3.79	0.438	4.23
	P59-ROX-041514	4/15/2014		48.60	NE	<0.005	<0.005		0.054		0.0495	<0.005	<0.001	0.196	0.0798	0.746	0.0027 J	<0.005	<0.001		0.385	0.214	<0.005	4.83	0.902	5.73
	P59-ROX-070814	7/8/2014		47.69	NE	<0.005	<0.005		<0.005		0.0948 J	<0.005	<0.001	0.228 J	0.16 J	1.55	<0.005	<0.005	<0.001		0.607	0.285 J	<0.005	4.48	0.929	5.41
	P59-ROX-101414	10/14/2014	47.91 - 72.91	46.18	NE	<0.005	<0.005		<0.005 UJ		0.0932 J	<0.005	0.0041 J	0.38 J	0.188 J	1.13	<0.005	<0.005	<0.001		0.901	0.26 J	<0.005	5.14	1.03	6.17
P-66	P66-ROX-051012	5/10/2012	34.72 - 59.72	32.48	NE	<0.005	<0.005		<0.005		0.123	<0.005	0.0771	<0.0001	0.152	0.0021	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0012	0.0012	0.0024
	P66-ROX-080312	8/3/2012		30.51	NE	<0.005	<0.005		<0.005		0.0874	<0.005	0.103	0.0013	0.112	0.0013	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0011	0.0011	0.0022
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	<0.005		<0.005		0.122	<0.005	0.0733	<0.005	0.156	0.0014	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P66-ROX-011813	1/18/2013		35.70	NE	<0.005	<0.005		<0.005		0.146	<0.005	0.104	<0.005	0.193	0.0015	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00093 J	0.00093 J
	P66-ROX-041113	4/11/2013		36.03	NE	<0.005	<0.005		<0.005		0.287	<0.005	0.086	<0.005	0.384	0.0012	<0.005	<0.005	<0.001		0.0041 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P66-ROX-071213	7/12/2013		33.20	NE	<0.005	<0.005 UJ		<0.005		0.191	<0.005	<0.001	<0.005	0.229	0.0018	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	0.001	0.0015
	P66-ROX-101013	10/10/2013		33.66	NE	<0.005	<0.005		<0.005		0.151	<0.005	0.085	0.0104	0.204	0.0013	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00096 J	0.00096 J
	P66-ROX-110713	11/7/2013		33.66	NE	<0.005	<0.005		<0.005		0.0958	<0.005	0.0528	0.0057	0.0658	0.00086 J	<0.005	<0.005	0.0015		<0.005	<0.005	<0.005	<0.001	0.00057 J	0.00057 J
	P66-ROX-012914	1/29/2014		36.39	NE	<0.005	<0.005		<0.005		0.131	<0.005	<0.001	<0.005	0.157	0.0017	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.0045	0.0045
	P66-ROX-041114	4/11/2014		37.10	NE	<0.005	<0.005		<0.005		0.115	<0.005	<0.001	0.0014 J	0.136	0.0017	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.00072 J	0.0013
	P66-ROX-070714	7/7/2014		35.60	NE	<0.005	<0.005		<0.005		0.144	<0.005	<0.001	<0.005	0.102	0.0022	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.001	0.00099 J	0.002
	P66-ROX-101414	10/14/2014	34.72 - 59.72	34.48	NE	<0.005	<0.005		<0.005 UJ		0.129	<0.005	0.0111	<0.005	0.137	0.0016	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	0.0009 J	0.0018
P-74	P74-ROX-011912	1/19/2012	44.43 - 69.43	38.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0158	0.0012 J	0.0038	<0.005	<0.005	<0.001		0.0292	0.0126	<0.005	0.0526	0.0262	0.0788
	P74-ROX-050712	5/7/2012		39.92	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00024	0.001 J	0.0017	<0.005	<0.005	<0.001		0.0155	0.0063	<0.005	0.0273	0.0093	0.0366
	P74-ROX-080612	8/6/2012		40.71	NE	<0.05	<0.05		<0.05 UJ		<0.05	<0.05	<0.01	0.0177	<0.05	0.159	<0.05	<0.05	<0.01		0.187	0.0663	<0.05 UJ	0.388	0.125	0.512
	P74-ROX-110112	11/1/2012		41.72	NE	<0.1	<0.1		<0.1		<0.1	<0.1	<0.02	0.0834 J	<0.1	0.232	<0.1	<0.1	<0.02		0.125	0.0414 J	<0.1	0.246	0.0811	0.328
	P74-ROX-011713	1/17/2013		42.65	NE	<0.1	<0.1		<0.1		<0.1	<0.1	<0.02	0.141	<0.1	0.278	<0.1	<0.1	<0.02		0.249	0.0973 J	<0.1	0.547	<0.02	0.555
	P74-ROX-041113	4/11/2013		42.83	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0016 J	<0.005	0.003	<0.005	<0.005	<0.001		0.0184	0.0138	<0.005	0.0456	0.0146	0.0601
	P74-ROX-071513	7/15/2013		40.11	NE	<0.005	<0.005		<0.005		0.0031 J	<0.005	<0.001	0.024	0.0054	0.0064	<0.005	<0.005	<0.001		0.101	0.0365	<0.005	0.109	0.027	0.136
	P74-ROX-101413	10/14/2013		41.72	NE	<0.005	<0.005		<0.005		0.0052	0.0074	0.0011	0.0257	0.0094	0.0344	<0.005	<0.005	<0.001		0.192	0.0739	<0.005	0.237	0.0483	0.285
	P74-ROX-012414	1/24/2014		43.35	NE	<0.005	<0.005		<0.005		0.0058	<0.005	<0.001	0.0322	0.0112	0.153	<0.005	<0.005	<0.001		0.292	0.11	<0.005	0.316	0.0579	0.374
	P74-ROX-041514	4/15/2014		44.74	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00074 J	<0.005	0.00078 J	<0.005	<0.005	<0.001		0.0083	0.0039 J	<0.005	0.0193	0.0015	0.0208
	P74-ROX-070814	7/8/2014		43.02	NE	<0.005	<0.005		<0.005		0.0018 J J	<0.005	<0.001	0.0128	0.0036 J	0.0087	<0.005	<0.005	<0.001		0.117	0.0518	<0.005	0.121	0.0122	0.133
	P74-ROX-101414	10/14/2014	44.43 - 69.43	41.48	NE	<0.005	<0.005		<0.005 UJ		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.00043 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-93A	P93A-ROX-012012	1/20/2012	48.17 - 63.17	41.66	NE	<0.005	<0.005		0.0041 J		0.0134	<0.005	0.0604	0.059 J	0.0134	0.0196	<0.005	<0.005	<0.001		0.101	0.025	<0.005 UJ	0.292	0.0416	0.333
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0218 J	<0.005 UJ	0.0557 J	0.0472	0.0239 J	0.0407 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.194 J	0.0416 J	<0.005 UJ	0.647 J	0.0841 J	0.731 J
	P93A-ROX-080912	8/9/2012		43.66	NE	<0.005	<0.005		<0.005		0.0126	<0.005	0.0485	0.0496	0.0137	0.0091	<0.005	<0.005	<0.001		0.145	0.0273	<0.005	0.436	0.0642	0.5
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.43	0.076 J	0.506
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.404	0.073 J	0.477
	P93A-ROX-012313	1/23/2013		45.89	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5 UJ	<0.5	<0.5	<0.5
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5 UJ	<0.5	<0.5	<0.5
	P93A-ROX-041113	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.005	<0.005		<0.005		0.0101	<0.005	0.0054	0.0303	0.0113	0.0072	<0.005	<0.005	<0.001		0.0915	0.0116	<0.005 UJ	0.273	0.0426	0.316
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.005	<0.005		<0.005		0.0142	<0.005	0.0034	0.0621	0.015	0.0133	<0.005	<0.005	<0.001		0.146	0.0163	<0.005 UJ	0.451	0.0789	0.53
	P93A-ROX-012914	1/29/2014		46.53	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-041714	4/17/2014		47.41	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93A-ROX-071814	7/18/2014		45.70	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93A-ROX-101514	10/15/2014	48.17 - 63.17	45.06	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		0.442 J	<2.5	<2.5	<0.5	0.263 J	0.65
	P93A-ROX-101514-DUP	10/15/2014		45.06	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	0.258 J	0.635
P-93B	P93B-ROX-012012	1/20/2012	74.60 - 76.60	41.72	NE	<0.005	<0.005		<0.005		0.022 J	<0.005	0.0063 J	0.0041 J J	0.0244 J	0.0678 J	<0.005	<0.005	<0.001		0.0114 J	0.0028 J J	<0.005 UJ	0.0598 J	0.0224 J	0.0822 J
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.005	<0.005		<0.005		0.0188 J	<0.005	<0.001	0.002	0.0272 J	0.0512 J	<0.005	<0.005	<0.001		0.0196 J	0.0054 J	<0.005	0.116 J	0.0251 J	0.141 J
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.005	<0.005		<0.005		0.0266	<0.005	<0.001	0.0049	0.0406	0.0786	<0.005	<0.005	<0.001		0.0372	0.0107	<0.005	0.245	0.0468	0.292
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.0986 J	<0.1	0.0986 J
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.5	<0.5		<0.5		<0.5	<0.5	<0.1	<0.5	<0.5	0.0719 J	<0.5	<0.5	<0.1		<0.5	<0.5	<0.5	0.237	<0.1	0.237
	P93B-ROX-012313	1/23/2013		45.89	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5 UJ	<1	<1	<1
	P93B-ROX-041113	4/11/2013		46.32	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.005	<0.005		<0.005		0.0247	<0.005	0.0035	0.0093	0.0357	0.0646	<0.005	<0.005	<0.001		0.025	0.0069	0.0176 J	0.195	0.0418	0.236
	P93B-ROX-101613	10/16/2013		44.43	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<10 UJ	<10		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2
	P93B-ROX-012814	1/28/2014		46.58	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<5	<5		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1
	P93B-ROX-041714	4/17/2014		47.46	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
	P93B-ROX-071714	7/17/2014		45.75	NE	<0.005 UJ	<0.005 UJ		<0.005 UJ		0.0227 J	<0.005 UJ	<0.001 UJ	0.0053 J	0.0297 J	0.0129 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.008 J	0.0037 J J	<0.005 UJ	0.0662 J	0.0047 J	0.0708
	P93B-ROX-101514	10/15/2014	74.60 - 76.60	45.15	NE	<2.5	<2.5		<2.5		<2.5	<2.5	<0.5	<2.5	<2.5	<0.5	<2.5	<2.5	<0.5		<2.5	<2.5	<2.5	<0.5	<0.5	<0.5
P-93C	P93C-ROX-012012	1/20/2012	94.26 - 96.26	41.57	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.006	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.004	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0053	0.000065 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0056	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0044	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0045	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.005	<0.005		<0.005		0.002 J	<0.005	0.0049	<0.005	0.002 J	0.007	<0.005	<0.005	<0.001		0.0016 J	<0.005	<0.005 UJ	0.0076	0.0015	0.0091
	P93C-ROX-080813	8/8/2013		43.31	NE	<0.25	<0.25		<0.25		<0.25	<0.25	<0.05	<0.25	<0.25	<0.05	<0.25	<0.25	<0.05		<0.25	<0.25	<0.25	<0.05	<0.05	<0.05
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.005 UJ	<0.005		<0.005		<0.005	<0.005	0.0035 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0047	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0043	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-071714	7/17/2014		45.61	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0061 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93C-ROX-101514	10/15/2014	94.26 - 96.26	44.99	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0046	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
P-93D	P93D-ROX-012012	1/20/2012	125.75 - 127.75	41.77	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00016	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00077 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0092 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0023	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.0015 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.005	<0.005 UJ		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.005 UJ	<0.005		<0.005		<0.005	<0.005	0.00066 J J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P93D-ROX-013114	1/31/2014		46.62	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0011	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0017 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-071714	7/17/2014		45.78	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0011 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P93D-ROX-101514	10/15/2014	125.75 - 127.75	45.14	NE	<0.05	<0.05		<0.05		<0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01		0.0083 J	<0.05	<0.05	<0.01	<0.01	<0.01
	P93D-ROX-110414	11/4/2014		45.14	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.002	<0.005	0.00067 J	0.0018	<0.005	<0.005	<0.001		0.00057 J	<0.005	<0.005	<0.001	<0.001	<0.001
P-114	P114-ROX-012012	1/20/2012	32.67 - 52.67	27.17	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-050912	5/9/2012		28.09	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0035 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.00083 J	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		0.00039 J	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-110912	11/9/2012		30.90	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0076 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0013 J	<0.001	0.0013 J
	P114-ROX-012313	1/23/2013		30.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.003 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-041513	4/15/2013		31.80	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0051	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0023 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0022 J	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001
	P114-ROX-101713	10/17/2013		29.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0036	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-012814	1/28/2014		32.11	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0153	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-042114	4/21/2014		32.22	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0093	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-071814	7/18/2014		30.87	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0037	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	P114-ROX-101714	10/17/2014	32.67 - 52.67	29.43	NE	<0.005	<0.005		<0.005		<0.005	<0.005	0.0098 J	<0.005	0.00087 J J	<0.001	<0.005 UJ	<0.005	<0.001		<0.005	0.00043 J J	<0.005 UJ	0.00059 J J	<0.001	0.00059 J J
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00048	0.00096 J	0.0038	<0.005	<0.005	<0.001		0.0095	0.0023 J	<0.005	0.0607	0.0151	0.0758
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.00038	<0.005	0.0015	<0.005	<0.005	<0.001		0.0042 J	0.0012 J	<0.005	0.0289	0.0074	0.0363
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.0026 J	<0.005	<0.005	0.0122	0.0037	0.0159
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005	<0.005		<0.005		0.0066	<0.005	<0.001	0.0076	0.0156	0.0016	<0.005	<0.005	<0.001		0.0786	0.022	<0.005 UJ	0.114	0.0159	0.13
	ROST3MW-ROX-040513	4/5/2013				<0.005	<0.005		<0.005		0.0032 J	<0.005	<0.001	0.132 J	0.0082	0.0076	<0.005	<0.005	<0.001		0.0531	0.0145	<0.005	0.0603	0.0126	0.0729
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.005	<0.005		<0.005 UJ		0.0146	<0.005	<0.001	0.0411	0.0279	0.014	<0.005	<0.005	<0.001		0.164	0.0373	<0.005 UJ	0.644	0.124	0.768
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.005	<0.005 UJ		<0.005		0.0017 J	<0.005	<0.001	0.0045 J	0.0029 J	0.0018	<0.005	<0.005	<0.001		0.0168	0.0035 J	<0.005	0.0422	0.0123	0.0546
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.005	<0.005		<0.005		0.00099 J	<0.005	<0.001	<0.005	0.002 J	0.0012	<0.005	<0.005	<0.001		0.0207	0.0057	<0.005	0.0377	0.0063	0.044
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.005	<0.005		<0.005		0.00043 J	<0.005	<0.001	0.00084 J	0.00082 J	0.0015	<0.005	<0.005	<0.001		0.0121	0.003 J	<0.005	0.0287	0.0028	0.0315
	ROST3MW-ROX-071414	7/14/2014		41.88	NE	<0.005	<0.005		<0.005		0.00053 J	<0.005	<0.001	0.0045 J	0.00098 J	0.0024	<0.005	<0.005	<0.001		0.0132	0.0032 J	<0.005	0.0371	0.0041	0.0412
	ROST3MW-ROX-100914	10/9/2014	37.81 - 47.81	41.31	NE	<0.005	<0.005		<0.005		0.0021 J	<0.005	<0.001	0.0061	0.0028 J	0.0032	<0.005	<0.005	<0.001		0.018	0.005	<0.005 UJ	0.0651	0.0205	0.0856

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CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						VOCs																		
						Ethyl methacrylate	Hexachlorobutadiene	Hexane	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)
			Screening Values (mg/L)				0.007 [3]	0.42 [3]	0.035 [3]		0.7 [1]	0.56 [3]	0.07 [1]	0.14 [1]	0.7 [3]	1.0 [1]	0.0056 [3]	0.07 [1]	0.005 [1]			0.07 [3]	7.0 [2]	10 [1]		10 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	0.0018	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.005	<0.005 UJ		<0.005		0.0036 J	<0.005	<0.001	0.0331	0.0059	0.0596	<0.005	<0.005	<0.001		0.0374	0.0076	<0.005	0.373	0.207	0.581
	ROST4PZ-ROX-102912	10/29/2012		40.75	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0021	<0.001	0.0021
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		0.002 J	0.0014 J	<0.005	0.0018	<0.001	0.0018
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.005	<0.005		<0.005 UJ		0.00061 J J	<0.005 UJ	<0.001	<0.005	0.0011 J	0.0006 J J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.0016 J	<0.005	<0.005	<0.001 UJ	<0.001 UJ	<0.001 UJ
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.005	<0.005		<0.005 UJ		0.0025 J	<0.005	<0.001	0.0189	0.0041 J	0.041	<0.005	<0.005	<0.001		0.0194	0.0044 J	<0.005 UJ	0.126	0.0649	0.191
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.005	<0.005 UJ		<0.005		0.00066 J	<0.005	<0.001	0.0054	0.0012 J	0.0013	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0101	0.0054	0.0155
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	0.00073 J	0.0014	<0.005	<0.005	<0.001		0.0017 J	<0.005	<0.005	0.0124	0.0057	0.018
	ROST4PZC-ROX-041014	4/10/2014		42.05	NE	<0.005	<0.005		<0.005		<0.005	<0.005	<0.001	<0.005	<0.005	0.00057 J	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0015	0.0015	0.003
	ROST4C-ROX-071114	7/10/2014		42.22	NE	<0.005	<0.005		<0.005		0.00037 J	<0.005	<0.001	0.0104	<0.005	0.0421	<0.005	<0.005	<0.001		0.00082 J	<0.005	<0.005	0.0574	0.0815	0.139
	ROST4PZC-ROX-100914	10/9/2014	34.95 - 44.95	41.30	NE	<0.005	<0.005		<0.005		0.0011 J	<0.005	<0.001	0.0169	0.0011 J	0.0196	<0.005	<0.005	<0.001		0.0046 J	0.00047 J	<0.005 UJ	0.112	0.0634	0.176
T-12	T12-ROX-011912	1/19/2012	46.46 - 72.46	41.0	NE	<0.005	<0.005		<0.005		0.022	<0.005	0.0016	0.132	0.03	0.175	<0.005	<0.005	<0.001		0.34	0.0715	0.0952	0.684	0.0399	0.724
	T12-ROX-050912	5/9/2012		42.62	NE	<0.025	<0.025		<0.025		0.0572	<0.025	<0.005	0.0924	0.101	0.388	<0.025	<0.025	<0.005		0.476	0.0765	<0.025	2.87	0.251	3.12
	T12-ROX-080212	8/2/2012		41.92	NE	<0.05	<0.05		<0.05		0.0297 J	<0.05	<0.01	0.0625	0.0486 J	0.197	<0.05	<0.05	<0.01		0.403	0.0474 J	<0.05	1.32	0.0709	1.39
	T12-ROX-110512	11/5/2012		43.91	NE	<0.05	<0.05		<0.05		0.0468 J	<0.05	<0.01	0.125	0.0831	0.322	<0.05	<0.05	<0.01		0.385	0.0543	<0.05	2.55	0.176	2.73
	T12-ROX-011813	1/18/2013		44.50	NE	<0.025	<0.025		<0.025		0.031	<0.025	<0.005	0.129	0.0466	0.184	<0.025	<0.025	<0.005		0.42	0.0407	<0.025	1.11	0.0252	1.13
	T12-ROX-041513	4/15/2013		44.99	NE	<0.05	<0.05		<0.05		0.0405 J	<0.05	<0.01	0.266 J	0.076	0.592	<0.05	<0.05	<0.01		0.309	<0.05	<0.05	1.2	0.104	1.3
	T12-ROX-071613	7/16/2013		42.33	NE	<0.005	<0.005 UJ		<0.005		0.0363 J	<0.005	<0.001	0.122 J	0.0627 J	0.186 J	<0.005	<0.005	<0.001		0.361 J	0.0238 J	<0.005 UJ	0.794 J	0.0145 J	0.808 J
	T12-ROX-101513	10/15/2013		43.73	NE	<0.025	<0.025		<0.025		0.0618	<0.025	<0.005	0.215 J	0.114	0.697	<0.025	<0.025	<0.005		0.575	0.0607	<0.025	2.43	0.139	2.57
	T12-ROX-012414	1/24/2014		45.26	NE	<0.005	<0.005		<0.005		0.0362	<0.005	<0.001	0.171	0.0676	0.421	<0.005	<0.005	<0.001		0.526	0.0507	<0.005	1.12	0.0469	1.23
	T12-ROX-041514	4/15/2014		46.72	NE	<0.005	<0.005		<0.005		0.0306	<0.005	<0.001	0.12	0.0534	0.406	<0.005	<0.005	<0.001		0.22 J	0.0339	<0.005	0.841	0.0401	0.864
	T12-ROX-070814	7/8/2014		45.13	NE	<0.005	<0.005		<0.005		0.0577 J	<0.005	<0.001	0.146	0.0912	0.686	<0.005	<0.005	<0.001		0.425	0.0589	<0.005	1.25	0.0909	1.3
	T12-ROX-101714	10/17/2014	46.46 - 72.46	44.40	NE	<0.05	<0.05		<0.05		0.0459 J	<0.05	<0.01	0.184 J	0.0707	0.722	<0.05 UJ	<0.05	<0.01		0.244	0.0391 J	<0.05 UJ	2.25	0.114	2.36

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
				Screening Values (mg/L)		0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-01	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	0.000077 J	0.000035 J	<0.01	0.000062 J	0.00011	0.0001	0.00011	<0.00011 U	0.00012	<0.01 UJ	<0.01	<0.0051	<0.002	<0.00039 U	<0.01	<0.0051	0.00011	<0.00011 U	<0.0051	<0.01	<0.0051	<0.01
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	0.00032 J	<0.011
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.00099 J	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	MW1-ROX-121712	12/17/2012		41.22	NE																						
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.000024 U	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0011 U	<0.011
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.000026 U	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	0.000027 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.0024 U	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00065 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.003 J J	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0057 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ
	MW1-ROX-070914	7/9/2014		42.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW1-ROX-100614	10/6/2014	48.80 - 58.80	41.1	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
MW-02	MW2-ROX-011612	1/16/2012	49.87 - 59.87	38.89	NE	0.000057 J	<0.00011	<0.011	<0.00011	<0.000053	0.000033 J	0.00004 J	<0.000047 U	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.00083 U	<0.00047 U	<0.011	<0.0053	<0.00011	<0.00047 U	<0.0053	<0.011	<0.0053	0.0035 J
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	0.0055 J
	MW2-ROX-073012	7/30/2012		40.60	NE	0.000051 J	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00059 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	0.00036 J	0.0045 J
	MW2-ROX-102612	10/26/2012		42.35	NE	0.000093 J	<0.00011	<0.011	<0.00011	0.00016	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0034 J
	MW2-ROX-011113	1/11/2013		42.94	NE	0.00016	0.000019 J	<0.011 UJ	<0.00011	<0.000056	0.000027 J	0.000039 J	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.005 J
	MW2-ROX-071113	7/11/2013		40.82	NE	0.000035 J	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.00063 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	0.005 J
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.00011	0.00018	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW2-ROX-041014	4/10/2014		44.66	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012 UJ	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
	MW2-ROX-071414	7/14/2014		43.13	NE	0.000084 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00037 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW2-ROX-101014	10/10/2014	49.87 - 59.87	42.49	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
MW-03	MW3-ROX-011612	1/16/2012	34.67 - 44.67	24.93	NE	<0.0001	<0.0001	<0.01	0.000063 J	0.00011	0.00012	0.00013	<0.00013 U	0.00012	<0.01 UJ	<0.01	<0.0052	<0.0004 U	<0.00039 U	<0.01	<0.0052	0.000098 J	<0.00013 U	<0.0052	<0.01	<0.0052	<0.01
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0053	<0.00067 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.00059 U	<0.01
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.0001	0.000023 J	<0.01 UJ	0.000037 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	MW3-ROX-071113	7/11/2013		26.32	NE	0.000028 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0038	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00038 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW3-ROX-071114	7/10/2014		29.05	NE	<0.0001	<0.0001	<0.011	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.011	<0.011	<0.0054	0.0013 J	<0.0054	<0.011	<0.0054	0.000028 J	<0.0001	<0.0022	<0.011	<0.0054	<0.011
	MW3-ROX-100914	10/9/2014	34.67 - 44.67	28.18	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-04	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.0001	<0.0001	<0.01	0.00003 J	0.00012	0.00012	0.00013	<0.0002 U	0.00015	<0.01 UJ	<0.01	<0.0052	<0.0005 U	<0.00073 U	<0.01	<0.0052	0.00014	<0.00019 U	<0.0052	<0.01	<0.0052	<0.01
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0056 J	<0.01	<0.0051	<0.00079 U	0.00039 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0014 J	<0.01
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000046 U	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.00069 U	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.0012 J	<0.01
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.00012	<0.00012	<0.012 UJ	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
	MW4-ROX-030413	3/4/2013		40.20	NE																						
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.000036 U	<0.00011	<0.011	<0.00011	<0.000055	0.00004 J	0.000034 J	0.000061 J	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0055 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW4-ROX-071614	7/16/2014		40.18	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00038 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW4-ROX-101614	10/16/2014	46.06 - 56.06	39.49	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012
MW-05	MW5-ROX-011712	1/17/2012	33.97 - 43.97	24.76	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0015 U	<0.00049 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00064 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	0.0011 J	<0.01
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW5-ROX-011113	1/11/2013		28.75	NE	0.000071 J	0.000066 J	<0.011 UJ	0.000028 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.0001	<0.0001	<0.01	<0.0001	0.0001 J	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW5-ROX-011714	1/17/2014		29.59	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW5-ROX-041014	4/10/2014		30.09	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW5-ROX-071414	7/14/2014		28.59	NE	0.000075 J	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW-5-ROX-100914	10/9/2014		27.75	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
MW-06A	MW6A-ROX-011712	1/17/2012	34.83 - 44.83	26.74	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000064 U	<0.00008 U	<0.00009 U	<0.00015 U	0.000094 J	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00014 U	<0.0054	<0.011	<0.0054	<0.011
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0029 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	0.000073 J	<0.0001	<0.01 UJ	<0.01	<0.0051	0.00054 J	<0.0051	<0.01	<0.0051	<0.0001	0.000066 J	<0.002	<0.01	<0.0051	<0.01
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	0.00052 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW6A-ROX-100713	10/7/2013		28.87	NE	0.0001 J	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.00082 U	<0.011
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	0.000093 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	0.00078 J	<0.011
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.00057 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.00066 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6A-ROX-071014	7/10/2014		30.75	NE	<0.00011	0.000075 J	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6A-ROX-100814	10/8/2014	34.83 - 44.83	29.84	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-06B	MW6B-ROX-011712	1/17/2012	64.05 - 69.05	26.77	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00015 U	<0.00011 U	<0.00028 U	0.0001 J	<0.011 UJ	<0.011	<0.0055	<0.0011 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00027 U	<0.0055	<0.011	<0.0055	<0.011
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00049 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	0.00057 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.00057 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00084 U	<0.011
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	0.000051 J	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000042 J	<0.0022	<0.011	<0.0054	<0.011
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6B-ROX-071014	7/10/2014		30.81	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6B-ROX-100814	10/8/2014	64.05 - 69.05	29.87	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
MW-06C	MW6C-ROX-011712	1/17/2012	84.95 - 89.95	26.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.00046 U	<0.011	<0.0054	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.0001	<0.0001 UJ	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01 UJ	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.00056 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0013 U	<0.011
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	0.000041 J	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012
	MW6C-ROX-071014	7/10/2014		30.60	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	0.000034 J	<0.00011	<0.000056	0.000035 J	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	0.000037 J	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6C-ROX-100814	10/8/2014	84.95 - 89.95	29.67	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
MW-06D	MW6D-ROX-011712	1/17/2012	104.72 - 109.72	26.33	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0055	<0.011	<0.0055	<0.011
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0044 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	0.00022 J	<0.01
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.00011	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.001 U	<0.011
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW6D-ROX-071014	7/10/2014		31.47	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6D-ROX-100814	10/8/2014	104.72 - 109.72	29.53	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.016	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW6D-ROX-100814-DUP	10/8/2014		29.53	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-07	MW7-ROX-011812	1/18/2012	42.92 - 52.92	38.10	NE	0.00025	<0.0001	<0.01	<0.0001	<0.00005	<0.000024 U	<0.00005	<0.0001	<0.0001		<0.01 UJ	<0.005	<0.002	0.00049 J	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	0.00027	<0.00011	<0.011	<0.00011	<0.000056	<0.00003 U	<0.000056	<0.00011	<0.00011		<0.011 UJ	<0.0056	0.00044 J	0.00048 J	<0.011	<0.0056	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011
	MW7-ROX-050412	5/4/2012		39.19	NE	0.00028	<0.0001	<0.01	<0.0001	0.00011	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00071 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	MW7-ROX-080712	8/7/2012		39.50	NE	0.00024	0.000037 J	<0.01 UJ	0.000022 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0006 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.00058 U	<0.01
	MW7-ROX-103012	10/30/2012		41.23	NE	0.00031	<0.00012	<0.012 UJ	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	0.0015 J	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	0.00034	<0.00011	<0.011 UJ	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.0007 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW7-ROX-011513	1/15/2013		42.21	NE	0.00073	0.00011	<0.011 UJ	0.000059 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00061 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	0.00066	0.000093 J	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00055 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW7-ROX-041013	4/10/2013		42.70	NE	0.0012	0.00015	<0.011	0.000089 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00083 J	<0.011	<0.0054	<0.011
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	0.0012	0.00016	<0.011	0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00088 J	<0.011	<0.0053	<0.011
	MW7-ROX-071713	7/17/2013		39.60	NE	0.00019	0.000031 J	<0.011	0.000028 J	0.00004 J	0.000044 J	0.000045 J	0.00008 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	0.000077 J	<0.0022	<0.011	<0.0054	<0.011
	MW7-ROX-101613	10/16/2013		40.64	NE	0.00035	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW7-ROX-013014	1/30/2014		42.94	NE	0.00028	<0.0001	<0.01	0.00029	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW7-ROX-041614	4/16/2014		43.79	NE	0.00034	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW7-ROX-071614	7/16/2014		42.05	NE	0.00024	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	0.00022	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW7-ROX-101614	10/16/2014	42.92 - 52.92	41.31	NE	0.00024	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW7-ROX-101614-DUP	10/16/2014		41.31	NE	0.00022	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
MW-08	MW8-ROX-011812	1/18/2012	33.60 - 43.60	29.15	NE	0.00038 J	<0.00053	<0.011	<0.00053	<0.00026	<0.00053	<0.00026	<0.00053	<0.00053		<0.011 UJ	<0.0053	0.00052 J	0.00042 J	<0.011	<0.0053	<0.00053	<0.00053	0.0006 J	<0.011	<0.0053	0.015
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0204	<0.011	<0.0053	0.00053 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00044 J	<0.011	<0.0053	0.0595
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00047 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0557
	MW8-ROX-080712	8/7/2012		30.97	NE	0.00023	0.00013	<0.011 UJ	0.000055 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00051 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00035 J	<0.011	<0.0018 U	0.015
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	0.0002	0.00029	<0.011 UJ	0.000071 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00043 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0004 J	<0.011	<0.0018 U	0.0158
	MW8-ROX-103012	10/30/2012		32.32	NE	0.00026	0.00011	<0.011 UJ	0.00044	<0.00087 U	0.00053 B	0.00057 B	0.00058 B	0.00064 B	<0.011	<0.011	<0.0053	0.0012 J	0.00086 J	<0.011	<0.0053	0.00066 B	0.00059 B	<0.0021	<0.011	<0.0053	0.0085 J
	MW8-ROX-011513	1/15/2013		33.30	NE	0.00017	0.000085 J	<0.011 UJ	0.000029 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00089 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.019
	MW8-ROX-041013	4/10/2013		33.77	NE	0.00018	0.000059 J	<0.011	0.000072 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0023	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0358
	MW8-ROX-071713	7/17/2013		30.43	NE	0.0002	<0.0001	<0.01	0.000049 J	<0.000052	0.000021 J	<0.000052	0.00004 J	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.009 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	0.00019	0.000056 J	<0.011	0.000061 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0004 J	<0.011	<0.0054	0.0089 J
	MW8-ROX-101613	10/16/2013		31.59	NE	0.00021	0.000089 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0005 J	<0.011	<0.0054	0.0066 J
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	0.0002	0.000058 J	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	0.0004 J	<0.012	<0.0059	0.0062 J
	MW8-ROX-013014	1/30/2014		34.02	NE	0.0002	0.000089 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00053 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.0005 J	<0.01	<0.0051	0.0124
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	0.00021	0.000083 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00072 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00053 J	<0.011	<0.0054	0.0121
	MW8-ROX-041614	4/16/2014		34.73	NE	0.00018	0.000074 J	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0005 J	<0.011	<0.0056	<0.011
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	0.00016	0.000063 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00045 J	<0.01	<0.0051	<0.01
	MW8-ROX-071614	7/16/2014		33.01	NE	0.00018	0.000068 J	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00038 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00041 J	<0.01	0.00057 J	<0.01
	MW8-ROX-101614	10/16/2014	33.60 - 43.60	32.23	NE	0.00021	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0099 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
				Screening Values (mg/L)		0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-09	MW9-ROX-011612	1/16/2012	46.45 - 56.45	39.50	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	0.000058 J	0.000051 J	<0.000096 U	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.00085 U	<0.00037 U	<0.011	<0.0057	<0.00011	<0.000078 U	<0.0057	<0.011	<0.0057	<0.011
	MW9-ROX-050312	5/3/2012		41.03	NE													0.0016 J J	0.00045 JB J								
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00043 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW9-ROX-011113	1/11/2013		43.90	NE	0.000068 J	0.000064 J	<0.011 UJ	0.00006 J	<0.000054	<0.00011	0.000026 J	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0016 UJ	<0.01 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE							0.000035 J															
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.00011	<0.00011	<0.011	<0.00011	0.000024 J	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.00054 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW9-ROX-070914	7/9/2014		44.35	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00036 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW9-ROX-100714	10/7/2014	46.45 - 56.45	43.52	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012
MW-10	MW10-ROX-011612	1/16/2012	44.43 - 54.43	39.28	NE	<0.00011	<0.00011	<0.011	0.000027 J	0.000037 J	0.000031 J	0.000043 J	<0.000042 U	<0.00011	<0.011 UJ	<0.011	<0.0053	0.0255	<0.0013 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.0001	<0.0001	<0.01 UJ	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00067 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW10-ROX-102612	10/26/2012		43.08	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW10-ROX-121712	12/17/2012		43.08	NE																						
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.0001	<0.0001	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	<0.01	<0.01	<0.01	<0.01
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0018 U	<0.011
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0027 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW10-ROX-011514	1/15/2014		44.42	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	0.000096 J	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00054 J	<0.0053	<0.011 UJ	<0.0054 UJ	<0.00011	0.000074 J	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	<0.00068 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW10-ROX-070914	7/9/2014		44.35	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00052 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW10-ROX-100714	10/7/2014	44.43 - 54.43	43.58	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
MW-11	MW11-ROX-011712	1/17/2012	41.66 - 51.66	37.44	NE				0.000022 J J					0.000065 J J													
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.00012	<0.00012	<0.012 UJ	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012 UJ	<0.00012	<0.012	<0.012	<0.0058	<0.00056 U	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00042 U	<0.011
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.005 UJ	<0.002 UJ	<0.005 UJ	<0.01 UJ	<0.005 UJ	<0.0001 UJ	<0.0001 UJ	<0.002 UJ	<0.01 UJ	<0.005 UJ	<0.01 UJ
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0052 U	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0011 U	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0011 U	<0.011
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0056	<0.0056 U	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW11-ROX-070914	7/9/2014		41.75	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	MW11-ROX-100714	10/7/2014	41.66 - 51.66	40.89	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-12	MW12-ROX-011712	1/17/2012	41.92 - 51.92	37.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00016 U	<0.00013 U	<0.00021 U	0.00013	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.00029 U	<0.011	<0.0054	<0.00011	<0.00021 U	<0.0054	<0.011	<0.0054	<0.011
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.000039 U	<0.00004 U	<0.000067 U	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.00033 U	<0.011	<0.0056	<0.00011	<0.000051 U	<0.0056	<0.011	<0.0056	<0.011
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0053	<0.0019 U	0.00029 J	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.00077 U	<0.011
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	0.000026 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.00011	<0.00011	<0.011	<0.00011	0.00012 J	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.00062 U	<0.011 UJ
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01 UJ	<0.0052 UJ	<0.0001	<0.0001	<0.0021	<0.01 UJ	<0.0052	<0.01 UJ
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.00011	<0.00011	<0.01	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.01	<0.01 UJ	<0.0051	<0.00039 U	<0.0051	<0.01	<0.0051	<0.00011	<0.00011	<0.002	<0.01	<0.0051	<0.01
	MW12-ROX-070914	7/9/2014		41.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW12-ROX-100614	10/6/2014	41.92 - 51.92	40.98	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
MW-13	MW13-ROX-012012	1/20/2012	25.57 - 35.57	24.77	NE	<0.00011	0.00014	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0087 J J	<0.011	<0.0053	<0.0007 U	<0.0007 U	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	MW13-ROX-080812	8/8/2012		26.67	NE	0.0001 J	0.00019	<0.011 UJ	0.000063 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.00011	<0.000063 U	<0.011	<0.000058 U	<0.00014 U	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.00079 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW13-ROX-100913	10/9/2013		26.94	NE	0.000098 J	0.000071 J	<0.01	<0.0001	0.000022 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00068 J	<0.0052	<0.01	<0.0052	0.000034 J	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW13-ROX-041114	4/11/2014		30.15	NE	0.00013	0.000066 J	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.00069 U	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
	MW13-ROX-070714	7/7/2014		28.49	NE	<0.00011	0.000061 J	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	MW13-ROX-101014	10/10/2014	25.57 - 35.57	27.48	NE	<0.00012	0.00019	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
MW-14	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	0.00046	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00042 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	0.00084 J	<0.0052	<0.01
	MW14-ROX-080312	8/3/2012		NM	NE	0.00095	0.00015	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00049 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00076 J	0.00096 J	<0.0053	<0.011
	MW14-ROX-103112	10/31/2012		32.02	NE	0.00074	0.00008 J	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0003 J	<0.01	<0.005	<0.01 UJ
	MW14-ROX-011813	1/18/2013		33.05	NE	0.00092	0.00013	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	MW14-ROX-041113	4/11/2013		33.31	NE	0.00068	0.000098 J	<0.011	<0.00011	0.00013	<0.00011	0.000054	0.000053 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW14-ROX-071213	7/12/2013		30.36	NE	0.00046 B	<0.000062 U	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00066 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW14-ROX-101013	10/10/2013		30.80	NE	0.00065	0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	0.00019 J	<0.011	<0.0057	<0.011
	MW14-ROX-012914	1/29/2014		33.67	NE	0.00062	0.00012	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00056 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW14-ROX-041114	4/11/2014		34.30	NE	0.00037	0.000089 J	<0.012	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.012	<0.012	<0.006	<0.00069 U	<0.006	<0.012	<0.006	<0.00011	<0.00011	<0.0024	<0.012	<0.006	<0.012
	MW14-ROX-070714	7/7/2014		32.82	NE	0.00033	0.000063 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00048 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW14-ROX-101414	10/14/2014	33.42 - 43.42	31.65	NE	0.00054	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.0001 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0021 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0052 UJ	<0.01 UJ
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00061 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012
	MW16-ROX-071014	7/10/2014		43.15	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	MW16-ROX-100714	10/7/2014	37.06 - 47.06	42.27	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012

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CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	0.00018	<0.0001	<0.01 UJ	0.00002 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	0.0031 J	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	0.0146
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	0.00018	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.0033 J	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	0.0149
	MW22-ROX-040513	4/5/2013		42.23	NE	0.00018	0.000049 J J	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0269
	MW22-ROX-071113	7/11/2013		39.35	NE	0.00026	0.00048	<0.011	0.000035 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0017 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.104
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	0.00018	0.00047	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.0021 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0978
	MW22-ROX-100913	10/9/2013		40.39	NE	0.00019	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0863
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	0.00018	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0826
	MW22-ROX-012014	1/20/2014		42.49	NE	0.00015	<0.00011	<0.053	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.053	<0.053	<0.027	<0.011	<0.027	<0.053	<0.027	<0.00011	<0.00011	<0.011	<0.053	<0.027	0.0399 J
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	0.00014	<0.00011	<0.054	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.054	<0.054	<0.027	<0.011	<0.027	<0.054	<0.027	<0.00011	<0.00011	<0.011	<0.054	<0.027	0.0364 J
	MW22-ROX-041014	4/10/2014		43.15	NE	0.0001 J	<0.00011	<0.056	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.056 UJ	<0.056	<0.028	<0.011	<0.028	<0.056	<0.028	<0.00011	<0.00011	<0.011	<0.056	<0.028	0.0316 J
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	0.00012	<0.00011	<0.056	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.056 UJ	<0.056	<0.028	<0.011	<0.028	<0.056	<0.028	<0.00011	<0.00011	<0.011	<0.056	<0.028	0.032 J
	MW22-ROX-071414	7/14/2014		41.85	NE	0.00013	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00045 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0281
	MW22-ROX-101014	10/10/2014	37.88 - 47.88	41.43	NE	0.00029	0.00019	<0.013	0.00019	<0.000063	<0.00013	<0.000063	<0.00013	<0.00013	<0.013	<0.013	<0.0063	<0.0025	<0.0063	<0.013	<0.0063	<0.00013	<0.00013	<0.0025	<0.013	<0.0063	<0.013
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.0001	<0.0001 UJ	<0.01 UJ	<0.0001	<0.000052	<0.0001	0.000057	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	MW24-ROX-071113	7/11/2013		40.35	NE	0.000024 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011		<0.011	<0.0054	<0.0022	<0.0054			<0.00011	<0.00011	<0.0022		<0.0054	
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	MW24-ROX-071114	7/10/2014		42.97	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	MW24-ROX-100814	10/8/2014	38.89 - 48.89	42.16	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
MW-25	MW25-ROX-102114	10/21/2014	35.59 - 45.59	36.44	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0025 J
MW-26	MW26-ROX-102114	10/21/2014	38.15 - 48.15	39.43	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
MW-27	MW27-ROX-102114	10/21/2014	39.79 - 49.79	41.57	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
MW-28	MW28-ROX-102114	10/21/2014	33.61 - 43.61	36.44	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
P-54	P54-ROX-011712	1/17/2012	38.00 - 63.00	37.17	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.000024 U	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P54-ROX-050412	5/4/2012		38.77	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0045 J	<0.01	<0.0051	0.0133	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P54-ROX-080212	8/2/2012		38.95	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P54-ROX-103012	10/30/2012		40.70	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P54-ROX-011113	1/11/2013		41.56	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P54-ROX-041013	4/10/2013		41.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	P54-ROX-050313	5/3/2013		41.80	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P54-ROX-071113	7/11/2013		39.07	NE	0.000032 J	0.000016 J	<0.01	0.000018 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00052 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P54-ROX-100813	10/8/2013		39.94	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	P54-ROX-011514	1/15/2014		42.20	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00058 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P54-ROX-040914	4/9/2014		42.80	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
	P54-ROX-071114	7/10/2014		41.71	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P54-ROX-100814	10/8/2014	38.00 - 63.00	40.88	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
P-55	P55-ROX-011912	1/19/2012	39.82 - 64.82	41.09	NE	0.00017	<0.0001	<0.01	<0.0001	<0.000052	0.000022 J	<0.000052	<0.0001	<0.0001		<0.01 UJ	<0.0052	<0.0021	<0.00048 U	<0.01	<0.0052	<0.0001	<0.0001	0.00035 J	<0.01	<0.0052	<0.01
	P55-ROX-011912-D	1/19/2012		41.09	NE	0.00015	<0.00011	<0.011	<0.00011	<0.000054	0.000067 J	0.000061	0.00011	0.000071 J		<0.011 UJ	<0.0054	<0.0022	<0.00035 U	<0.011	<0.0054	<0.00011	0.000086 J	0.00033 J	<0.011	<0.0054	<0.011
	P55-ROX-050912	5/9/2012		42.44	NE	0.00036	0.000095 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	0.00069	0.00019	<0.02	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.01	<0.0001	<0.0001	0.001 J	<0.01	<0.01	0.004 J
	P55-ROX-012113	1/21/2013		43.60	NE	0.00054	0.00014	<0.01 UJ	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.001 J	<0.01	0.00073 J	0.0024 J
	P55-ROX-041513	4/15/2013		43.63	NE	0.00073	0.00021	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.0017 J	<0.01	<0.0052	<0.01
	P55-ROX-071613	7/16/2013		40.06	NE	0.00066	0.0002	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.00066 U	<0.0056	<0.011	<0.0056 UJ	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	0.0024 J
	P55-ROX-101013	10/10/2013		41.67	NE	0.00071	0.00019	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.0006 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	0.0016 J	<0.011	<0.0055	0.0014 J

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
P-56	P56-ROX-011912	1/19/2012	40.82 - 65.82	41.81	NE	0.00064	<0.0001	<0.01	0.00011	<0.000051	0.000021 J	<0.000051	<0.0001	<0.0001		<0.01 UJ	<0.0051	<0.00066 U	<0.00053 U	<0.01	<0.0051	<0.0001	<0.0001	0.00064 J	<0.01	<0.0051	<0.01
	P56-ROX-050812	5/8/2012		43.09	NE	0.00057	0.0001	<0.01	<0.0001	<0.00011 U	<0.00012 U	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P56-ROX-080612	8/6/2012		43.60	NE	0.00058	0.000087 J		0.00013	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00051 J	<0.01	<0.0014 U	<0.01
	P56-ROX-103112	10/31/2012		44.80	NE	0.0011	<0.0001	<0.01 UJ	0.00012	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00066 J	<0.01	<0.0051	<0.01 UJ
	P56-ROX-011713	1/17/2013		45.65	NE	0.00039	0.000083 J	<0.01 UJ	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0044	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P56-ROX-041213	4/12/2013		46.12	NE	0.00053	0.000088 J	<0.011	0.0001 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	P56-ROX-071513	7/15/2013		43.25	NE	0.00065	0.00013	<0.011	0.00014	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055 UJ	<0.0022	<0.0055	<0.011	<0.0055 UJ	<0.00011	<0.00011	0.00075 J	<0.011	<0.0055	0.0086 J
	P56-ROX-101013	10/10/2013		44.48	NE	0.0006	0.000092 J	<0.011	0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	0.00059 J	<0.011	<0.0055	0.0042 J
	P56-ROX-012214	1/22/2014		46.35	NE	0.00055	<0.0001	<0.01	0.00013	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00047 J	<0.01	<0.0052	<0.01
	P56-ROX-041414	4/14/2014		47.32	NE	0.00051	0.000081 J	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	0.00067 J	<0.012	<0.0059	<0.012
	P56-ROX-070814	7/8/2014		45.97	NE	0.00035	0.000081 J	<0.011 UJ	0.0001 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00049 J	<0.011	<0.0056	<0.011
	P56-ROX-101314	10/13/2014	40.82 - 65.82	45.05	NE	0.00057	0.00011	<0.011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.001 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00055 J	<0.011	<0.0054	<0.011
P-57	P57-ROX-021312	2/13/2012	40.46 - 65.46	42.13	NE	0.00056	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00043 J	<0.00043 U	<0.01	<0.0051	<0.0001	<0.0001	0.00087 J	<0.01	<0.0051	0.0045 J
	P57-ROX-050712	5/7/2012		42.92	NE	0.00033	<0.0001	<0.01	<0.0001	0.00011	0.00012	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0008 J	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P57-ROX-080612	8/6/2012		43.53	NE	0.00056	0.0001		0.000073 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00079 J	<0.01	<0.00096 U	0.0029 J
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	0.00051	0.0001		0.000064 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00073 J	<0.01	<0.001 U	0.0029 J
	P57-ROX-110512	11/5/2012		44.98	NE	0.00053	<0.0001	<0.01	0.000061 J	<0.00005	<0.0001	<0.00005	0.00005 J	<0.0001	<0.01 UJ	<0.01	<0.005	0.00052 J	<0.005	<0.01	<0.005	<0.0001	0.000049 J	0.0006 J	<0.01	<0.005	<0.01 UJ
	P57-ROX-012913	1/29/2013		45.92	NE	0.00061	0.00013	<0.012 UJ	0.000076 J	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	0.0023 J J
	P57-ROX-041113	4/11/2013		46.29	NE	0.00063	0.00012	<0.01	0.000073 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P57-ROX-071613	7/16/2013		43.38	NE	0.00047	0.0001 J	<0.011	0.000077 J	0.00012	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.0022	<0.0056	<0.011	<0.0056 UJ	<0.00011	<0.00011	0.00088 J	<0.011	<0.0056	0.002 J
	P57-ROX-101413	10/14/2013		44.38	NE	0.00045	0.000071 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0012 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00082 J	<0.011	<0.0054	0.0029 J
	P57-ROX-020314	2/3/2014		46.57	NE	0.00041	0.000075 J	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00067 J	<0.011	<0.0053	<0.011
	P57-ROX-041514	4/15/2014		46.70	NE	0.00036	0.000074 J	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0007 J	<0.011	<0.0056	<0.011 UJ
	P57-ROX-070814	7/8/2014		45.95	NE	0.00029	0.000069 J	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0007 J	<0.011	<0.0053	<0.011
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	0.00029	0.000075 J	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00071 J	<0.011	<0.0054	<0.011
	P57-ROX-101414-DUP	10/14/2014	40.46 - 65.46	45.00	NE	0.0003	<0.00012	<0.012	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	<0.0023	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012
	P57-ROX-101414	10/14/2014		45.00	NE	0.00036	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
P-58	P58-ROX-011912	1/19/2012	40.21 - 65.21	39.73	NE	0.001	<0.00011	<0.011	<0.00011	0.000039 J	0.000051 J	0.000032 J	0.000047 J	<0.00011		<0.011 UJ	<0.0053	0.0361 J	<0.00059 U	<0.011	<0.0053	<0.00011	<0.00011	0.0026 J	<0.011	<0.0053	<0.011
	P58-ROX-011912-D	1/19/2012		39.73	NE	0.00092	<0.00011	<0.011	<0.00011	0.000036 J	0.000036 J	<0.000053	<0.00011	<0.00011		<0.011 UJ	<0.0053	0.024 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0023 J	<0.011	<0.0053	<0.011
	P58-ROX-050712	5/7/2012		40.90	NE	0.00059	0.00019	<0.01	0.00057 J	0.00017	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.0017 J	<0.01	<0.0051	<0.01
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	0.00044	0.00015	<0.01	<0.0001 UJ	0.00015	0.000032 J	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P58-ROX-080612	8/6/2012		41.63	NE	0.00086	0.00029		0.000094 J	0.00024	0.00011	0.000064	0.000043 J	<0.0001	<0.01	<0.01	<0.005	0.00043 J	<0.005	<0.01	<0.005	0.0001	<0.0001	0.0022	<0.01	<0.005	<0.01
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	0.00098	0.0003		0.00011	0.00021	0.000098 J	0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00042 J	<0.005	<0.01	<0.005	0.000099 J	<0.0001	0.0025	<0.01	<0.005	<0.01
	P58-ROX-110612	11/6/2012		43.09	NE																						
	P58-ROX-121012	12/10/2012		43.09	NE	0.00093	0.00024	<0.011	0.00083	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0103	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.002 J	<0.011	<0.0054	<0.011
	P58-ROX-012213	1/22/2013		44.21	NE	0.0011	0.0006	<0.011 UJ	<0.00011	0.00038	0.00022	0.00012	0.00012	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.00039	0.000068 J	0.0038	<0.011	<0.0054	<0.011
	P58-ROX-041113	4/11/2013		44.40	NE	0.0015	0.0005	<0.011	<0.00011	0.0003	0.00019	0.000095	0.000074 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.00032	<0.00011	0.0044	<0.011	<0.0054	<0.011
	P58-ROX-071613	7/16/2013		41.49	NE	0.00076	0.00027	<0.011	0.000096 J	0.00018	0.000073 J	0.000045 J	<0.00011	<0.00011	<0.011	<0.011	<0.0055 UJ	<0.0022	<0.0055	<0.011	<0.0055 UJ	0.00012	<0.00011	0.0025	<0.011	<0.0055	<0.011
	P58-ROX-101413	10/14/2013		42.19	NE	0.00084	<0.00011	<0.011	<0.00011	<0.000054	0.000067 J	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0099	<0.0054	<0.011	<0.0054	0.000099 J	<0.00011	0.0024	<0.011	<0.0054	0.0016 J
	P58-ROX-020314	2/3/2014		44.66	NE	0.00061	0.00018	<0.01	<0.0001	0.000035 J	0.000047 J	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	0.000079 J	<0.0001	0.0016 J	<0.01	<0.0052	<0.01
	P58-ROX-041514	4/15/2014		45.66	NE	0.0011	0.00072	0.0028 J	0.00071	0.00082	0.00063	0.00072	0.00071	0.00071	<0.011 UJ	0.0051 J	0.0015 J	<0.00099 U	0.00091 J	0.0044 J	0.0043 J	0.00073	0.00075	0.0023	<0.011 UJ	0.00077 J	<0.011 UJ
	P58-ROX-071814	7/18/2014		43.80	NE	0.00067	0.00021	<0.011	<0.00011	0.000083	0.000086 J	0.000045 J	0.000035 J	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	0.00015	<0.00011	0.0018 J	<0.011	<0.0055	<0.011
	P58-ROX-101514	10/15/2014	40.21 - 65.21	43.14	NE	0.00058	0.00023	<0.011	<0.00011	0.00013	0.00011	0.000074	0.000065 J	<0.00011	<0.011	<0.011	0.014	<0.00042 U	<0.0054	<0.011	<0.0054	0.00018	<0.00011	0.0022	<0.011	<0.0054	<0.011

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
P-59	P59-ROX-011912	1/19/2012	47.91 - 72.91	42.88	NE	0.00036	<0.00011	<0.011	0.00025	0.000055 J	0.000038 J	0.000037 J	0.000052 J	<0.00011		0.0011 J	<0.0057	<0.00079 U	<0.0011 U	<0.011	<0.0057	0.000085 J	<0.00011	<0.0057	<0.011	<0.0057	0.0133
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	0.00037	<0.0001	<0.01	0.00015	0.00005 J	0.000029 J	0.000027 J	<0.0001	<0.0001		0.00091 J	<0.0051	<0.002	<0.00061 U	<0.01	<0.0051	0.000074 J	<0.0001	0.00042 J	<0.01	<0.0051	0.0108
	P59-ROX-050912	5/9/2012		44.11	NE	0.00022	<0.0001	<0.01	0.000095 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0161	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0085 J
	P59-ROX-080212	8/2/2012		44.07	NE	0.00042	0.0001 J	<0.011 UJ	0.00014	0.00021	0.000036 J	0.000047 J	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00036 J	<0.011	<0.0053	0.0088 J
	P59-ROX-110212	11/2/2012		45.98	NE	0.00043	<0.00011	<0.011	0.000086 J	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00031 J	<0.011	<0.0053	0.0102 J J
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	0.00042	<0.0001	<0.01	0.000084 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00029 J	<0.01	<0.0052	0.0092 J J
	P59-ROX-013013	1/30/2013		46.60	NE	0.00047	<0.0001	<0.01 UJ	0.00012	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0041	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.0581
	P59-ROX-041213	4/12/2013		46.95	NE	0.00057	0.00013	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0831 J	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0919
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	0.00058	0.00012	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0518 J	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0914
	P59-ROX-071613	7/16/2013		44.13	NE	0.00035	0.000071 J	<0.011	0.000092 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054 UJ	<0.0022	<0.0054	<0.011	<0.0054 UJ	<0.00011	<0.00011	0.00041 J	<0.011	<0.0054	0.0583
	P59-ROX-101013	10/10/2013		45.50	NE	0.00055	0.000084 J	<0.011	0.00021	0.000068	<0.00011	0.000039 J	<0.00011	<0.00011	<0.011 UJ	0.0009 J	<0.0054	0.00069 J	<0.0054	<0.011	<0.0054	0.000088 J	<0.00011	<0.0022	<0.011	<0.0054	0.078
	P59-ROX-020314	2/3/2014		47.35	NE	0.00046	<0.0001	<0.01	0.00018	0.000035 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	0.000046 J	<0.0001	<0.0021	<0.01	<0.0052	0.147 J
	P59-ROX-041514	4/15/2014		48.60	NE	0.0013	<0.00011	<0.011	0.00018	0.00006	0.000042 J	0.000044 J	0.000035 J	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	0.0001 J	<0.00011	<0.0021	<0.011	<0.0053	<0.011 UJ
	P59-ROX-070814	7/8/2014		47.69	NE	0.0015	0.000091 J	<0.011 UJ	0.00012	0.000029 J	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	0.000027 J	<0.00011	<0.0023	<0.011	<0.0057	0.17
	P59-ROX-101414	10/14/2014	47.91 - 72.91	46.18	NE	0.00045 J	<0.00054	<0.011	<0.00054	<0.00027	<0.00054	<0.00027	<0.00054	<0.00054	<0.011	<0.011	0.0035 J	<0.0022	<0.0054	<0.011	<0.0054	<0.00054	<0.00054	<0.0022	<0.011	<0.0054	0.0492
P-66	P66-ROX-051012	5/10/2012	34.72 - 59.72	32.48	NE	0.00078	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	0.000024 J	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.00053 U	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0018 J	<0.01	<0.005	<0.01
	P66-ROX-080312	8/3/2012		30.51	NE	0.00073	0.00025	<0.011 UJ	<0.00011	0.00018	0.000066 J	0.00008	0.000066 J	<0.00011	<0.011	<0.011	<0.0053	0.00075 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P66-ROX-103112	10/31/2012		34.75	NE	0.00078	0.00022	<0.01 UJ	0.0006	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.0019 J	<0.01	<0.005	<0.01 UJ
	P66-ROX-011813	1/18/2013		35.70	NE	0.00074	0.00034	<0.011 UJ	<0.000055 U	<0.000053	<0.00011	<0.000028 U	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0018 J	<0.011	<0.0053	<0.011
	P66-ROX-041113	4/11/2013		36.03	NE	0.0011	0.00028	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.0025	<0.011	<0.0053	<0.011
	P66-ROX-071213	7/12/2013		33.20	NE	0.00087	<0.00011	<0.011	<0.0002 U	0.00018 B	<0.00015 U	0.00017 B	<0.00019 U	0.00015	<0.011 UJ	<0.011	<0.0056	0.0124	<0.0056	<0.011	<0.0056	0.00017	0.00017	0.0016 J	<0.011	<0.0056	<0.011
	P66-ROX-101013	10/10/2013		33.66	NE	0.00066	0.0002	<0.011	<0.00011	0.000028 J	<0.00011	<0.000056	0.000036 J	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	<0.011
	P66-ROX-110713	11/7/2013		33.66	NE																						
	P66-ROX-012914	1/29/2014		36.39	NE	0.00099	0.00032	<0.011	<0.00011	0.000039 J	0.000044 J	0.000048 J	0.000052 J	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	0.000047 J	0.000035 J	0.0019 J	<0.011	<0.0053	<0.011
	P66-ROX-041114	4/11/2014		37.10	NE	0.00058	0.00017	<0.012	<0.00012	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	<0.00068 U	<0.0058	<0.012	<0.0058	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012
	P66-ROX-070714	7/7/2014		35.60	NE	0.00033	0.00016	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P66-ROX-101414	10/14/2014	34.72 - 59.72	34.48	NE	0.00045	0.00018	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	0.0012 J	<0.011	<0.0055	<0.011
P-74	P74-ROX-011912	1/19/2012	44.43 - 69.43	38.77	NE	<0.000095	<0.000095	<0.0095	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095		<0.0095 UJ	<0.0048	<0.0019	<0.00043 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0001	<0.0001	<0.01	<0.0001	0.00012	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P74-ROX-080612	8/6/2012		40.71	NE	0.00016	0.000056 J		0.000041 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.0012 U	0.0039 J
	P74-ROX-110112	11/1/2012		41.72	NE	0.00023	<0.0001	<0.01 UJ	0.000044 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00044 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00031 J	0.001 J	<0.0052	0.008 J J
	P74-ROX-011713	1/17/2013		42.65	NE	0.00019	0.0001	<0.01 UJ	0.000063 J	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	0.0028 J	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0021 J
	P74-ROX-041113	4/11/2013		42.83	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P74-ROX-071513	7/15/2013		40.11	NE	<0.000063 U	<0.00011	<0.011	0.000032 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	0.0013 J	<0.0054	<0.011
	P74-ROX-101413	10/14/2013		41.72	NE	0.0002	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00097 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.00033 J	0.0012 J	<0.0054	0.0019 J
	P74-ROX-012414	1/24/2014		43.35	NE	0.00023	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00063 J	0.00097 J	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P74-ROX-041514	4/15/2014		44.74	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.0059	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	<0.012 UJ
	P74-ROX-070814	7/8/2014		43.02	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	P74-ROX-101414	10/14/2014	44.43 - 69.43	41.48	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	0.00096 J	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																			
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
P-93A	P93A-ROX-012012	1/20/2012	48.17 - 63.17	41.66	NE	0.00014	<0.000095	<0.0095 UJ	0.000032 J	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	<0.006 U	<0.00053 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.0001 U	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0029	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P93A-ROX-080912	8/9/2012		43.66	NE	0.00015	<0.00011	<0.011	0.000048 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0032 J	<0.011	<0.0054	0.0153	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.00022 U	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.00027 J	<0.01	<0.0052	<0.01
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	0.00029 B	<0.0001	<0.01	0.000061 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93A-ROX-012313	1/23/2013		45.89	NE	0.00016	<0.0001	<0.01 UJ	0.000028 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0099	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	0.00014	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.011	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01
	P93A-ROX-041113	4/11/2013		46.29	NE	0.00023	<0.0001	<0.01	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	0.00021	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.00011	0.000032 J	<0.011	0.00003 J	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00024 J	<0.011	<0.0056	<0.011
	P93A-ROX-101113	10/11/2013		44.18	NE	0.00017	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93A-ROX-012914	1/29/2014		46.53	NE	0.00022	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P93A-ROX-041714	4/17/2014		47.41	NE	0.00013	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P93A-ROX-071814	7/18/2014		45.70	NE	0.00017	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.0041	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.00037 U	<0.011
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	0.00016	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
	P93A-ROX-101514	10/15/2014	48.17 - 63.17	45.06	NE	0.0002	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0004 U	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	0.0003 J	<0.01	<0.0052	<0.01
	P93A-ROX-101514-DUP	10/15/2014		45.06	NE	0.00022 J	<0.00011 UJ	<0.011 UJ	<0.00011 UJ	<0.000054 UJ	<0.00011 UJ	<0.000054 UJ	<0.00011 UJ	<0.00011 UJ	<0.011 UJ	<0.011 UJ	0.0044 J J	<0.0041 UJ	<0.0054 UJ	<0.011 UJ	<0.0054 UJ	<0.00011 UJ	<0.00011 UJ	0.00033 J J	<0.011 UJ	<0.0054 UJ	<0.011 UJ
P-93B	P93B-ROX-012012	1/20/2012	74.60 - 76.60	41.72	NE	<0.000095	0.000028 J	<0.0095 UJ	<0.000095	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	<0.0033 U	<0.00033 U	<0.0095	<0.0048	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.00011	0.000087 J	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0036	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.00051 U	<0.011
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.0001	0.000073 JB	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0017 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.000047 U	0.000058 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00057 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93B-ROX-012313	1/23/2013		45.89	NE	0.00014	0.000072 J	<0.011 UJ	0.00013	0.00022	0.00011	0.00013	0.00012	0.00012	<0.011	<0.011	<0.0053	0.0055	0.0032 J	0.0013 J	<0.0053	0.00012	0.00012	<0.0021	<0.011	<0.0053 UJ	0.0021 J
	P93B-ROX-041113	4/11/2013		46.32	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P93B-ROX-101613	10/16/2013		44.43	NE	<0.0001	0.000065 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<0.0001	0.000091 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93B-ROX-012814	1/28/2014		46.58	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.00072 J	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0012 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93B-ROX-041714	4/17/2014		47.46	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	0.0015 J	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00045 J	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P93B-ROX-071714	7/17/2014		45.75	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93B-ROX-101514	10/15/2014	74.60 - 76.60	45.15	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
P-93C	P93C-ROX-012012	1/20/2012	94.26 - 96.26	41.57	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	0.000019 J	0.000027 J	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.0096 U	<0.00037 U	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.00012 U	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.008	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011
	P93C-ROX-080912	8/9/2012		43.57	NE	0.000089 J	0.000022 J	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0043	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.00046 U	<0.01
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00081 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.0049	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.000045 U	<0.00011	<0.011	0.000021 J	<0.000056	0.00015	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P93C-ROX-080813	8/8/2013		43.31	NE																						
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93C-ROX-071714	7/17/2014		45.61	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93C-ROX-101514	10/15/2014	94.26 - 96.26	44.99	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																		
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
P-93D	P93D-ROX-012012	1/20/2012	125.75 - 127.75	41.77	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.0001 U	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01
	P93D-ROX-080812	8/8/2012		43.71	NE	0.00017	0.000051 J	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.0021 U	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93D-ROX-110812	11/8/2012		NM	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.000026 U	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00057 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01 UJ	<0.005 UJ	<0.0001	<0.0001	<0.002	<0.01 UJ	<0.005	<0.01 UJ
	P93D-ROX-013114	1/31/2014		46.62	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0045	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0005 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P93D-ROX-071714	7/17/2014		45.78	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P93D-ROX-101514	10/15/2014	125.75 - 127.75	45.14	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P93D-ROX-110414	11/4/2014		45.14	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-114	P114-ROX-012012	1/20/2012	32.67 - 52.67	27.17	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000051	0.000055 J	0.00005 J	0.000058 J	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.0013 U	<0.00044 U	<0.01	<0.0051	<0.0001	0.000053 J	<0.0051	<0.01	<0.0051	<0.01
	P114-ROX-050912	5/9/2012		28.09	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0015 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	P114-ROX-080912	8/9/2012		29.13	NE	<0.0001	0.000029 J	<0.01	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0039	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0001	<0.0001	<0.01 UJ	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P114-ROX-012313	1/23/2013		30.22	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0059	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0001	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	P114-ROX-071813	7/18/2013		27.22	NE	0.00013 B	<0.00011	<0.011	0.00011	0.000045 J	0.000034 J	0.000064	0.000067 J	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	0.000073 J	<0.0022	<0.011	<0.0055	<0.011
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.00011	<0.00011	<0.011	0.00013	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	P114-ROX-101713	10/17/2013		29.43	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P114-ROX-012814	1/28/2014		32.11	NE	<0.00011	<0.00011	<0.011	0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00066 J	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	P114-ROX-042114	4/21/2014		32.22	NE	0.00011	<0.0001	<0.01	0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P114-ROX-071814	7/18/2014		30.87	NE	0.000082 J	<0.0001	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01
	P114-ROX-101714	10/17/2014	32.67 - 52.67	29.43	NE	0.000078 J	<0.00011	<0.011	<0.00011	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.0057	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	0.000023 J	<0.0001	<0.01	<0.0001	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00065 J	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	0.0016 J	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	0.0033 J	<0.011
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011 UJ
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	0.00025	0.000059 J	<0.01 UJ	0.000074 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.002	<0.01	<0.005 UJ	<0.01
	ROST3MW-ROX-040513	4/5/2013				0.00016	<0.00011 UJ	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	0.00029	<0.00011	<0.011	0.000091 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.00061 J	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	0.00025 J	<0.011 UJ	<0.0054	0.0016 J J
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	0.0001 J	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.0054 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.0053 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012 UJ	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.006	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012
	ROST3MW-ROX-071414	7/14/2014		41.88	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	ROST3MW-ROX-100914	10/9/2014	37.81 - 47.81	41.31	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00046 J	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl alcohol	bis(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl benzyl phthalate	4-Chloro-3-methylphenol (p-Chloro-m-cresol)	2-Chlorophenol	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol
					Screening Values (mg/L)	0.42 [1]	0.21 [3]	0.023 [3]	2.1 [1]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]	1.4 [2]		0.035 [2]	0.012 [1]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	0.00027	0.000072 J	<0.01	0.00011	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00027 J	<0.01	<0.005	<0.01
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	0.00039 B	<0.00011	<0.011	<0.00018 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.00042 J	<0.0053	<0.00051 U	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	0.00036 J	<0.011	0.0012 J	0.003 J
	ROST4PZ-ROX-102912	10/29/2012		40.75	NE	0.000054 J	<0.0001	<0.01 UJ	0.00005 J	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0045	<0.0052	<0.01	<0.0052	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.00011	<0.00011	<0.011 UJ	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	0.000066 J	0.000018 J	<0.011	0.000033 J	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.0055	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	0.00019	0.000073 J	<0.011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0032	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	0.00012	<0.00011	<0.011	<0.00011	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.00012	<0.00012	<0.012	<0.00012	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.01 UJ	<0.012	<0.0059	<0.0024	<0.0059	<0.01 UJ	<0.005 UJ	<0.00012	<0.00012	<0.0024	<0.01 UJ	<0.0059	<0.01 UJ
	ROST4PZC-ROX-041014	4/10/2014		42.05	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
	ROST4C-ROX-071114	7/10/2014		42.22	NE	<0.0001	<0.0001	<0.011	<0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.011	<0.011	<0.0053	0.0007 J	<0.0053	<0.011	<0.0053	<0.0001	<0.0001	<0.0021	<0.011	<0.0053	<0.011
	ROST4PZC-ROX-100914	10/9/2014	34.95 - 44.95	41.30	NE	<0.00011	<0.00011	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011
T-12	T12-ROX-011912	1/19/2012	46.46 - 72.46	41.0	NE	0.00047	<0.00011	<0.011	0.00014	<0.000056	0.000032 J	0.000035 J	0.000069 J	<0.00011		<0.011 UJ	<0.0056	<0.0017 U	<0.00062 U	<0.011	<0.0056	<0.00011	0.00005 J	0.00029 J	<0.011	<0.0056	0.0095 J
	T12-ROX-050912	5/9/2012		42.62	NE	0.00032	<0.0001	<0.01	0.000081 J	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.005	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01
	T12-ROX-080212	8/2/2012		41.92	NE	0.00044	0.000082 J	<0.011 UJ	0.0001 J	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	0.0003 J	<0.011	<0.0054	0.0153
	T12-ROX-110512	11/5/2012		43.91	NE	0.00044	<0.0001	<0.01	0.0001	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	0.00054 J	<0.005	<0.01	<0.005	<0.0001	<0.0001	0.00029 J	<0.01	<0.005	0.0028 J J
	T12-ROX-011813	1/18/2013		44.50	NE	0.0005	0.000093 J	<0.011 UJ	<0.00013 U	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.0053	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0065 J
	T12-ROX-041513	4/15/2013		44.99	NE	0.00063	0.00009 J	<0.01	<0.0001	<0.000051	<0.0001	<0.000051	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	0.00048 J	<0.01	<0.0051	<0.01
	T12-ROX-071613	7/16/2013		42.33	NE	0.00055	0.0001 J	<0.011	0.00015	0.00013	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	0.001 J	<0.0054 UJ	<0.0044 U	<0.0054	<0.011	<0.0054 UJ	<0.00011	<0.00011	0.00042 J	<0.011	<0.0054	0.0096 J
	T12-ROX-101513	10/15/2013		43.73	NE	0.00036	<0.00011	<0.011	0.00012	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	0.000028 J	<0.00011	0.00029 J	<0.011	<0.0054	0.0047 J
	T12-ROX-012414	1/24/2014		45.26	NE	0.0005	<0.0001	<0.01	0.00014	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0051	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0073 J
	T12-ROX-041514	4/15/2014		46.72	NE	0.00037	<0.00011	<0.011	0.00012	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	0.00031 J	<0.011	<0.0056	<0.011 UJ
	T12-ROX-070814	7/8/2014		45.13	NE	0.00024	<0.00011	<0.011 UJ	<0.00011	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.0054	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011
	T12-ROX-101714	10/17/2014	46.46 - 72.46	44.40	NE	0.00036	0.000072 J	<0.011	<0.00011	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.0056	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011

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						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)				0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-01	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	<0.0051	<0.0051	<0.0051	<0.01	0.00011	0.000059 J	<0.0051		<0.00012 U	<0.0051	<0.0002	0.000098 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.000098	<0.0051	0.00009 J
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.0051	<0.00054 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.0053	<0.00043 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J	<0.0053	<0.00011
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW1-ROX-121712	12/17/2012		41.22	NE																					
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000021 U	<0.0052	<0.0001
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.0053 UJ	<0.0012 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.0051	<0.0051	<0.0051	<0.01	0.000033 J	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000043 U	<0.0051	<0.0001
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW1-ROX-011414	1/14/2014		42.77	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.000031 J	<0.0053 UJ	<0.00011
	MW1-ROX-040714	4/7/2014		43.28	NE	<0.0054	<0.00029 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000023 U	<0.0057 UJ	<0.00011
	MW1-ROX-070914	7/9/2014		42.09	NE	<0.0054	0.0016 JB	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.000085 J	0.00012 JB J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW1-ROX-100614	10/6/2014	48.80 - 58.80	41.1	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
MW-02	MW2-ROX-011612	1/16/2012	49.87 - 59.87	38.89	NE	<0.0053	0.00056 J	<0.0053	<0.011	<0.00011	0.000052 J	<0.0053		<0.000054 U	<0.0053	0.0107	0.0229	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000066	<0.0053	<0.00011
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.0052	<0.0005 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0105	0.021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.0053	<0.00047 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0097	0.0229	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00004 J	<0.0053	0.000039 J
	MW2-ROX-102612	10/26/2012		42.35	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000061 J	0.00011	<0.0054		<0.00011	<0.0054	0.0091	0.0182	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00011	<0.0054	0.000046 J
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	0.00004 J	<0.00011	<0.0056		<0.00011	<0.0056	0.008	0.0162	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000044 J	<0.0056	0.000039 J
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.012	0.0256	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0123 J	0.0249	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000051 U	<0.0055 UJ	<0.00011
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.009	0.0201	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW2-ROX-012014	1/20/2014		44.00	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0094	0.0208	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000043 U	<0.0053	<0.00011
	MW2-ROX-041014	4/10/2014		44.66	NE	<0.006	<0.00046 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	0.0083	0.0193	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012
	MW2-ROX-071414	7/14/2014		43.13	NE	<0.0054	<0.00045 U	<0.0054	<0.011	0.00012	0.00014	<0.0054		<0.00011	<0.0054	0.01	0.0215	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00017 U	<0.0054	0.000096 J
	MW2-ROX-101014	10/10/2014	49.87 - 59.87	42.49	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.01	0.0214	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
MW-03	MW3-ROX-011612	1/16/2012	34.67 - 44.67	24.93	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000098 J	<0.0001	<0.0052		<0.00015 U	<0.0052	<0.00021	0.00015 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000095	<0.0052	0.000078 J
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.0052	<0.00047 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.0053	<0.00066 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J J	<0.0053	<0.00011
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.005	0.0025 J	<0.005	<0.01	0.000047 J	0.000052 J	<0.005		<0.0001	<0.005	<0.0002	0.000081 J	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.000068	<0.005 UJ	0.000036 J
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00044 J	0.00038	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	<0.000039 U	<0.0054 UJ	<0.000072 U
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00013 J	0.00014 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW3-ROX-011614	1/16/2014		29.91	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011 UJ	<0.000053	<0.0053 UJ	<0.00011
	MW3-ROX-040914	4/9/2014		30.50	NE	<0.0056	<0.00056 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000019 U	<0.0056	<0.00011
	MW3-ROX-071114	7/10/2014		29.05	NE	<0.0054	<0.00028 U	<0.0054	<0.011	<0.0001	<0.0001	<0.0054		<0.0001	<0.0054	0.000067 J	<0.0002	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00003 U	<0.0054	<0.0001
	MW3-ROX-100914	10/9/2014	34.67 - 44.67	28.18	NE	<0.0056	<0.00023 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)				0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-04	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	<0.0052	0.00077 J	<0.0052	<0.01	0.000047 J	<0.0001	<0.0052		<0.00018 U	<0.0052	0.0006	0.00059	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000057	<0.0052	0.000065 J
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.005	<0.00062 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00032	0.00025	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.0051	<0.00061 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW4-ROX-072512	7/25/2012		37.63	NE	<0.0051	0.00075 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.00054	0.00045 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0018 J	<0.0001
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.0051	0.00057 J	<0.0051	<0.01	<0.000047 U	<0.0001	<0.0051		<0.0001	<0.0051	0.00049	0.0004 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000031 U	0.0023 J	<0.0001
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00025	0.00016 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	0.00014 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	0.0608	<0.00011
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.006 UJ	<0.006	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	0.000099 J	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	0.0665	<0.00012
	MW4-ROX-030413	3/4/2013		40.20	NE																					
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00022	0.000082 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000054	0.11	<0.00011
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.0053 UJ	<0.00062 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000076 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.103	<0.00011
	MW4-ROX-071713	7/17/2013		37.61	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		0.000052 J	<0.0055	0.00037	0.00023	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.00003 U	0.0661	<0.00011
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00016 J	0.00015 J	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000054	0.0168 J	<0.00011
	MW4-ROX-013014	1/30/2014		41.09	NE	<0.0054	<0.0013 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00027	0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	<0.000022 U	0.0164 J	<0.00011
	MW4-ROX-041614	4/16/2014		41.91	NE	<0.0056	<0.00076 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000072 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW4-ROX-071614	7/16/2014		40.18	NE	<0.0052	<0.00043 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00024	0.00022	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000041 U	<0.0052	<0.0001
	MW4-ROX-101614	10/16/2014	46.06 - 56.06	39.49	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.0024	<0.0024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.000029 J	0.0115	<0.00012
MW-05	MW5-ROX-011712	1/17/2012	33.97 - 43.97	24.76	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0016	<0.00021	<0.011	<0.011	<0.011	<0.0053	0.00078 J	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.0051	<0.0005 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	0.00072 J	0.0117	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.0052	0.00057 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.003	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000025 U	0.0015 J	<0.0001
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.0091	0.000084 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0043	0.000084 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.000048 J	<0.0055	<0.00011
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.004	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW5-ROX-070913	7/9/2013		26.04	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.00099 U	<0.005		<0.0001	<0.005	0.0015	<0.0002 UJ	<0.01	<0.01	<0.01 UJ	<0.005	<0.005	<0.005	<0.01	<0.000074 U	<0.005	<0.0001
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	0.0038	0.00009 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW5-ROX-011714	1/17/2014		29.59	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0035	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW5-ROX-041014	4/10/2014		30.09	NE	<0.0056	<0.00087 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.0038	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW5-ROX-071414	7/14/2014		28.59	NE	<0.0053	<0.00037 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00052 B	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000088 U	<0.0053	<0.00011
	MW-5-ROX-100914	10/9/2014		27.75	NE	<0.0054	<0.00023 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00099 J	<0.0022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00003 U	0.00072 J	<0.00011
MW-06A	MW6A-ROX-011712	1/17/2012	34.83 - 44.83	26.74	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00015 U	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.005	0.00049 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW6A-ROX-011413	1/14/2013		31.00	NE	<0.0051 UJ	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		0.000072 J	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.0053	0.0018 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.000084	<0.0053 UJ	0.000053 J
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6A-ROX-011614	1/16/2014		31.62	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW6A-ROX-040814	4/8/2014		32.16	NE	<0.0056	<0.00075 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000054	<0.0056	<0.00011
	MW6A-ROX-040814-DUP	4/8/2014		32.16	NE	<0.0054	<0.00077 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000055	<0.0054	<0.00011
	MW6A-ROX-071014	7/10/2014		30.75	NE	<0.0054	<0.00026 U	<0.0054	<0.011	<0.00011	0.00013	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000046 J	<0.0054	<0.00011
	MW6A-ROX-100814	10/8/2014		29.84	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-06B	MW6B-ROX-011712	1/17/2012	64.05 - 69.05	26.77	NE	<0.0055	0.00055 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00028 U	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.005	0.00039 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.0051	0.0007 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.0051	0.00079 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.005	0.0026 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.0054	0.0012 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	0.0002 J	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.0054 UJ	<0.0054	<0.0054	0.0224	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6B-ROX-011614	1/16/2014		31.67	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		0.000043 J	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011
	MW6B-ROX-040814	4/8/2014		32.21	NE	<0.0053	<0.00043 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000018 J	<0.0053	<0.00011
	MW6B-ROX-071014	7/10/2014		30.81	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6B-ROX-100814	10/8/2014	64.05 - 69.05	29.87	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
MW-06C	MW6C-ROX-011712	1/17/2012	84.95 - 89.95	26.50	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.005	0.001 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.005	0.0022 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.0052	0.00077 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.00016 J	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.0055 UJ	0.00043 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6C-ROX-011614	1/16/2014		31.48	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW6C-ROX-040814	4/8/2014		32.01	NE	<0.0059	<0.0004 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012
	MW6C-ROX-071014	7/10/2014		30.60	NE	<0.0056	<0.00032 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		0.000035 J	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6C-ROX-100814	10/8/2014	84.95 - 89.95	29.67	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
MW-06D	MW6D-ROX-011712	1/17/2012	104.72 - 109.72	26.33	NE	<0.0055	0.00047 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.000085 U	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.005	0.00047 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.0005 U	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000052	<0.005	<0.0001
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.0053	0.00069 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6D-ROX-011614	1/16/2014		31.33	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	MW6D-ROX-040814	4/8/2014		31.85	NE	<0.0055	<0.00039 U	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW6D-ROX-071014	7/10/2014		31.47	NE	<0.0056	<0.00027 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW6D-ROX-071014-DUP	7/10/2014		31.47	NE	<0.0054	<0.00029 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6D-ROX-100814	10/8/2014	104.72 - 109.72	29.53	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW6D-ROX-100814-DUP	10/8/2014		29.53	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-07	MW7-ROX-011812	1/18/2012	42.92 - 52.92	38.10	NE	<0.005	0.00045 J	<0.005	<0.01	<0.0001	0.00018	<0.005		<0.0001	<0.005	0.0055	0.0069	<0.01	<0.01	<0.01 UJ	<0.005	<0.005	<0.005	<0.01	0.00029	0.15	<0.000042 U
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.0002	<0.0056		<0.00011	<0.0056	0.0057	0.0071	<0.011	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.00028	0.165	<0.000043 U
	MW7-ROX-050412	5/4/2012		39.19	NE	<0.005	<0.00095 U	<0.005	<0.01	0.000039 J	0.00019	<0.005		<0.0001	<0.005	0.0075	0.0087	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00028	0.0944	<0.0001
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00016	<0.0051		<0.0001	<0.0051	0.0055	0.0065	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00019	0.0576	<0.0001
	MW7-ROX-103012	10/30/2012		41.23	NE	<0.0058	<0.0058	<0.0058	<0.012	<0.00012	0.00023	<0.0058		<0.00012	<0.0058	0.0061 J	0.0077	<0.012	<0.012	<0.012	<0.0058	<0.0058 UJ	<0.0058	<0.012	0.00036	0.0615 J	<0.00005 U
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00026	<0.0056		<0.00011	<0.0056	0.008 J	0.0098	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00037	0.0812 J	<0.00005 U
	MW7-ROX-011513	1/15/2013		42.21	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	0.00004 J	0.00061	<0.0053		<0.00011	<0.0053	0.0187	0.0224	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.00086	0.0865 J	0.000089 J
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00057	<0.0052		<0.0001	<0.0052	0.0173	0.0207	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.00078	0.0735 J	0.000078 J
	MW7-ROX-041013	4/10/2013		42.70	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000039 J	0.00081	<0.0054		<0.00011	<0.0054	0.0271	0.0351	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0014	0.147	0.00015
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000068 J	0.00087	<0.0053		<0.00011	<0.0053	0.0274	0.0357	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0015	0.148	0.00016
	MW7-ROX-071713	7/17/2013		39.60	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00019	<0.0054		0.000078 J	<0.0054	0.0043	0.006	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00024	0.118	0.000039 J
	MW7-ROX-101613	10/16/2013		40.64	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00022	<0.0055		<0.00011	<0.0055	0.0082	0.011	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00019	0.0849	<0.00011
	MW7-ROX-013014	1/30/2014		42.94	NE	<0.005	<0.0007 U	<0.005	<0.01	<0.0001	0.00021	<0.005		<0.0001	<0.005	0.0059	0.0083	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00029	0.0314	<0.0001
	MW7-ROX-041614	4/16/2014		43.79	NE	<0.0052	<0.00071 U	<0.0052	<0.01	<0.0001	0.00026	<0.0052		<0.0001	<0.0052	0.0074	0.0103	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00033 B	0.0988	<0.0001
	MW7-ROX-071614	7/16/2014		42.05	NE	<0.0052	<0.00027 U	<0.0052	<0.01	<0.0001	0.00021	<0.0052		<0.0001	<0.0052	0.0052	0.0079	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00028	0.0618	<0.0001
	MW7-ROX-071614-DUP	7/16/2014		42.05	NE	<0.0052	<0.00038 U	<0.0052	<0.01	<0.0001	0.00019	<0.0052		<0.0001	<0.0052	0.0052	0.0077	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00026	0.0638	<0.0001
	MW7-ROX-101614	10/16/2014	42.92 - 52.92	41.31	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.0002	<0.0056		<0.00011	<0.0056	0.0049	0.0074	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00028	0.155	<0.00011
	MW7-ROX-101614-DUP	10/16/2014		41.31	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	0.00019	<0.0057		<0.00011	<0.0057	0.0047	0.007	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.00027	0.133	<0.00011
MW-08	MW8-ROX-011812	1/18/2012	33.60 - 43.60	29.15	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00053	0.00074	<0.0053		<0.00053	<0.0053	0.0165	0.0204	0.0044 J	0.0121	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.00041	0.375	<0.00053
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.0053	<0.00063 U	<0.0053	<0.011	<0.00011	0.00024	<0.0053		<0.00011	<0.0053	0.0085	0.0099	0.0302	0.0657	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00014	0.258 J	<0.00011
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0086	0.0102	0.0275	0.0569	<0.01	<0.005	<0.005	<0.005	<0.01	0.00014	0.12 J	<0.0001
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00027	<0.0054		<0.00011	<0.0054	0.0091	0.0109	0.0075 J	0.0231	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00015	0.136	<0.00011
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00026	<0.0056		<0.00011	<0.0056	0.0092	0.0111	0.0081 J	0.024	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00014	0.134	<0.00011
	MW8-ROX-103012	10/30/2012		32.32	NE	<0.0053	0.00082 J	0.00063 J	<0.011	0.00059 B	0.00053	<0.0053		0.00059 B	<0.0053	0.0097	0.0112	0.0058 J	0.0158	<0.011	<0.0053	<0.0053 UJ	0.00052 J	0.003 J	0.00057	0.165 J	0.00054 B
	MW8-ROX-011513	1/15/2013		33.30	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00011	0.00041	<0.0056		<0.00011	<0.0056	0.011	0.0129	0.0332	0.102	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00016	0.0997 J	<0.00011
	MW8-ROX-041013	4/10/2013		33.77	NE	<0.0053	0.0013 J	<0.0053	<0.011	0.000056 J	0.00032	<0.0053		<0.00011	<0.0053	0.0091	0.0113	0.0388	0.084	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00019	0.253 J	0.000042 J
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00033	<0.0052		<0.0001	<0.0052	0.0097 J	0.0113	0.0046 J	0.0106	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00015	0.328	0.000062 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00036	<0.0054		<0.00011	<0.0054	0.0087 J	0.0098	0.0037 J	0.0091 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00016	0.303	<0.00011
	MW8-ROX-101613	10/16/2013		31.59	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00041	<0.0054		<0.00011	<0.0054	0.0117	0.0136	0.0022 J	0.0052 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00011	0.0996	<0.00011
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	0.00037	<0.0059		<0.00012	<0.0059	0.0108	0.0128	0.0019 J	0.0046 J	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.000097	0.108	<0.00012
	MW8-ROX-013014	1/30/2014		34.02	NE	<0.0051	<0.0011 U	<0.0051	<0.01	<0.0001	0.00054	<0.0051		<0.0001	<0.0051	0.0137	0.0123	0.0128	0.0198	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00018	0.105	<0.0001
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<0.0054	<0.00092 U	<0.0054	<0.011	<0.00011	0.00052	<0.0054		<0.00011	<0.0054	0.0136	0.0123	0.0129	0.019	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00019	0.135	<0.00011
	MW8-ROX-041614	4/16/2014		34.73	NE	<0.0056	<0.00073 U	<0.0056	<0.011	<0.00011	0.00046	<0.0056		<0.00011	<0.0056	0.0142	0.0097	<0.011	0.0062 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00015 B J	0.135	<0.00011
	MW8-ROX-041614-DUP	4/16/2014		34.73	NE	<0.0051	<0.0006 U	<0.0051	<0.01	<0.0001	0.00043	<0.0051		<0.0001	<0.0051	0.0129	0.0086	<0.01	0.0053 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00016 B J	0.118	<0.0001
	MW8-ROX-071614	7/16/2014		33.01	NE	<0.0052	<0.00045 U	<0.0052	<0.01	<0.0001	0.00038	<0.0052		<0.0001	<0.0052	0.0125	0.0048	0.0037 J	0.0045 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0002 B	0.111	<0.0001
	MW8-ROX-101614	10/16/2014	33.60 - 43.60	32.23	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00054	<0.0056		<0.00011	<0.0056	0.0145	0.0045	0.019	0.0558	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00023	0.126	<0.00011

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						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-09	MW9-ROX-011612	1/16/2012	46.45 - 56.45	39.50	NE	<0.0057	0.00048 J	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.000098 U	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW9-ROX-050312	5/3/2012		41.03	NE																						
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.005	<0.00054 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	0.000066 J	0.00011	<0.0054		<0.00011	<0.0054	<0.00022	0.00014 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00012	<0.0054	0.000057 J
	MW9-ROX-040913	4/9/2013		44.67	NE	<0.0052 UJ	<0.0018 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0052 UJ		<0.0001 UJ	<0.0052 UJ	<0.00021 UJ	<0.00021 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.000052 UJ	<0.0052 UJ	<0.0001 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE																				<0.000028 U		
	MW9-ROX-100313	10/3/2013		42.27	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW9-ROX-011414	1/14/2014		44.47	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	<0.000053	<0.0053 UJ	<0.00011
	MW9-ROX-040714	4/7/2014		44.99	NE	<0.0056	<0.00062 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	0.0001 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056 U	<0.0056	<0.00011
	MW9-ROX-070914	7/9/2014		44.35	NE	<0.0054	<0.0006 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW9-ROX-100714	10/7/2014	46.45 - 56.45	43.52	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.0024	<0.0024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012
MW-10	MW10-ROX-011612	1/16/2012	44.43 - 54.43	39.28	NE	<0.0053	0.00081 J	<0.0053	<0.011	0.000052 J	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000055 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000072	<0.0053	0.00005 J
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.0052	<0.00041 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.000033 J	<0.0052 UJ	<0.0001
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.005	<0.00043 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW10-ROX-102612	10/26/2012		43.08	NE	<0.0056	<0.0056	<0.0056	<0.011	0.000052 J	0.000086 J	<0.0056		<0.00011	<0.0056	<0.00022	0.00009 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000076	<0.0056	0.00004 J
	MW10-ROX-121712	12/17/2012		43.08	NE																						
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000021 U	<0.005	<0.0001
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.01	<0.01	<0.01	<0.001	<0.0001	<0.0001	<0.002		<0.0001	<0.01		<0.01	<0.01	<0.01	<0.002	<0.004	<0.02	<0.003	<0.004	<0.0001	<0.005	<0.0001
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.0054 UJ	<0.0019 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000021 U	<0.0056	<0.00011
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW10-ROX-011514	1/15/2014		44.42	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		0.000072 J	<0.0053	<0.00021	<0.00021	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.000037 JB	<0.0054 UJ	<0.00011
	MW10-ROX-040714	4/7/2014		45.00	NE	<0.0053	<0.00085 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000042 U	<0.0053	<0.00011
	MW10-ROX-070914	7/9/2014		44.35	NE	<0.0054	<0.00065 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW10-ROX-100714	10/7/2014	44.43 - 54.43	43.58	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.0023	<0.0023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
MW-11	MW11-ROX-011712	1/17/2012	41.66 - 51.66	37.44	NE																						
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.0058	<0.00057 U	<0.0058	<0.012	<0.00012	<0.00012	<0.0058		<0.00012	<0.0058	<0.00023	<0.00023	<0.012	<0.012 UJ	<0.012	<0.0058	<0.0058	<0.0058	<0.012	<0.000058	<0.0058	<0.00012
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054 UJ	<0.00011
	MW11-ROX-011013	1/10/2013		41.43	NE	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.005 UJ		<0.0001 UJ	<0.005 UJ	<0.0002 UJ	<0.0002 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ	<0.000015 UJ	<0.005 UJ	<0.0001 UJ
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW11-ROX-011514	1/15/2014		42.16	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000026 U	<0.0055	<0.00011
	MW11-ROX-040714	4/7/2014		42.70	NE	<0.0056	<0.0007 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000023 U	<0.0056	<0.00011
	MW11-ROX-070914	7/9/2014		41.75	NE	<0.0057	<0.00042 U	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.00003 J	<0.0057	<0.00011
	MW11-ROX-100714	10/7/2014	41.66 - 51.66	40.89	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.0021	<0.0021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-12	MW12-ROX-011712	1/17/2012	41.92 - 51.92	37.70	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00023 U	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00007 U	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW12-ROX-072712	7/27/2012		39.22	NE	<0.0053	<0.00063 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.0051 UJ	<0.0051	<0.0051	<0.01	0.000045 J	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000032 U	<0.0051	<0.0001
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000044 J	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW12-ROX-070913	7/9/2013		39.28	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011 UJ	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011 UJ	<0.011 UJ	<0.011	<0.0055	<0.0055	<0.0055	0.0018 J J	<0.000055	<0.0053 UJ	<0.00011
	MW12-ROX-011514	1/15/2014		42.54	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01 UJ	<0.01 UJ	<0.01	<0.0052	<0.0052	<0.0052	<0.01 UJ	<0.000022 U	<0.0052 UJ	<0.0001
	MW12-ROX-040814	4/8/2014		43.15	NE	<0.0051	<0.0006 U	<0.0051	<0.01	<0.00011	<0.00011	<0.0051		<0.00011	<0.0051	<0.00023	<0.00023	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.000021 J	<0.0051	<0.00011
	MW12-ROX-070914	7/9/2014		41.97	NE	<0.0056	<0.00098 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW12-ROX-100614	10/6/2014	41.92 - 51.92	40.98	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
MW-13	MW13-ROX-012012	1/20/2012	25.57 - 35.57	24.77	NE	<0.0053	<0.00058 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00022	<0.00027 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.0015 J	0.000065 J
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00021	<0.00014 UJ	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.005	0.00054 J	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.0055 UJ	0.0027 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	0.00011 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	0.00011 J	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW13-ROX-071213	7/12/2013		25.67	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.000042	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.000067 U	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	<0.000076	<0.0054 UJ	<0.00004
	MW13-ROX-100913	10/9/2013		26.94	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW13-ROX-012914	1/29/2014		29.63	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.000096 U	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-041114	4/11/2014		30.15	NE	<0.006	<0.00079 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.000033 J	<0.006	<0.00012
	MW13-ROX-070714	7/7/2014		28.49	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	MW13-ROX-101014	10/10/2014	25.57 - 35.57	27.48	NE	<0.006	<0.006	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.0024	<0.0024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.000032 J	<0.006	<0.00012
MW-14	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.0052	0.00043 J	<0.0052	<0.01	<0.0001	0.00022	<0.0052		<0.0001	<0.0052	0.0101	0.0015	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW14-ROX-080312	8/3/2012		NM	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	0.00071	<0.0053		<0.00011	<0.0053	0.019	0.0038	<0.011	<0.011	<0.011	0.00032 J	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.005	0.00044 J	<0.005	<0.01	<0.0001	0.00029	<0.005		<0.0001	<0.005	0.0192	0.004	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	<0.000051	<0.005 UJ	<0.0001
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	0.00064	<0.005		<0.0001	<0.005	0.0215	0.0084	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW14-ROX-041113	4/11/2013		33.31	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000068 J	0.00016	<0.0054		<0.00011	<0.0054	0.0124	0.0018	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0001	<0.0054	0.000053 J
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.0053 UJ	0.00043 J	<0.0053	<0.011	<0.00011	<0.000093 U	<0.0053		<0.00011	<0.0053	0.0127	0.0027	<0.011	<0.011	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000032 U	<0.0053 UJ	<0.000067 U
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	0.00034	<0.0057		<0.00011	<0.0057	0.0184	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	MW14-ROX-012914	1/29/2014		33.67	NE	<0.0054	0.00045 J	<0.0054	<0.011	<0.00011	0.00041	<0.0054		<0.00011	<0.0054	0.0075	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW14-ROX-041114	4/11/2014		34.30	NE	<0.006	<0.00082 U	<0.006	<0.012	<0.00011	0.0003	<0.006		<0.00011	<0.006	0.0018	<0.00023	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.000057	<0.006	<0.00011
	MW14-ROX-070714	7/7/2014		32.82	NE	<0.0054	0.00031 J	<0.0054	<0.011	<0.00011	0.00024	<0.0054		<0.00011	<0.0054	0.0014 J	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00024 J	<0.0054	<0.00011
	MW14-ROX-101414	10/14/2014	33.42 - 43.42	31.65	NE	<0.0056	<0.00056 U	<0.0056	<0.011	<0.00011	0.00024	<0.0056		<0.00011	<0.0056	0.0014 J	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000021 U	<0.0056	<0.00011
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000085 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000025 J J	<0.0053	<0.00011
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.000058 J	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000018 U	<0.0056	<0.00011
	MW16-ROX-100813	10/8/2013		41.62	NE	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.0001 UJ	<0.0001 UJ	<0.0052 UJ		<0.0001 UJ	<0.0052 UJ	<0.00021 UJ	<0.00021 UJ	<0.01 UJ	<0.01 UJ	<0.01 UJ	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ	<0.000052 UJ	<0.0052 UJ	<0.0001 UJ
	MW16-ROX-011514	1/15/2014		43.76	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000031 U	<0.0052	<0.0001
	MW16-ROX-040914	4/9/2014		44.63	NE	<0.0059	<0.00067 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	<0.000059	<0.0059	<0.00012
	MW16-ROX-071014	7/10/2014		43.15	NE	<0.0054	<0.00021 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	MW16-ROX-100714	10/7/2014	37.06 - 47.06	42.27	NE	<0.006	<0.006	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.0024	<0.0024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.0052 UJ	0.0024 J	<0.0052	<0.01	<0.0001	0.00018	<0.0052		<0.0001	<0.0052	0.0276	0.05	0.018	0.0322	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00019	0.0111	<0.0001
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.0053 UJ	0.0024 J	<0.0053	<0.011	<0.00011	0.00018	<0.0053		<0.00011	<0.0053	0.028	0.0501	0.0187	0.0349	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0002	0.0122	<0.00011
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.0053	0.00057 J	<0.0053	<0.011	<0.00011	0.00018	<0.0053		<0.00011	<0.0053	0.0241	0.0413	0.0236	0.0403	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.00019	0.0123 J	<0.00011
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00027	<0.0054		<0.00011	<0.0054	0.0232 J	0.0393	0.0159	0.029	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.0002 B	0.0094 J	<0.00011
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.0056	0.00052 J	<0.0056	<0.011	<0.00011	0.00017	<0.0056		<0.00011	<0.0056	0.0216 J	0.037	0.0147	0.0269	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.0002 B	0.0088 J	<0.00011
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00019	<0.0054		<0.00011	<0.0054	0.0276	0.0468	0.0152	0.0319	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00019	<0.0054	<0.00011
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.0002	<0.0054		<0.00011	<0.0054	0.0265	0.0451	0.0139	0.0296	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00016	<0.0054	<0.00011
	MW22-ROX-012014	1/20/2014		42.49	NE	<0.027	<0.027	<0.027	<0.053	<0.00011	0.00017	<0.027		<0.00011	<0.027	0.0258	0.0459	0.0124 J	0.0313 J	<0.053	<0.027	<0.027	<0.027	<0.053	0.0002 B	0.0071 J	<0.00011
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.027	<0.027	<0.027	<0.054	<0.00011	0.00015	<0.027		<0.00011	<0.027	0.0232	0.0416	0.0118 J	0.0296 J	<0.054	<0.027	<0.027	<0.027	<0.054	0.0002 B	0.007 J	<0.00011
	MW22-ROX-041014	4/10/2014		43.15	NE	<0.028	<0.0016 U	<0.028	<0.056	<0.00011	<0.00011	<0.028		<0.00011	<0.028	0.0174	0.0287	0.0156 J	0.035 J	<0.056	<0.028	<0.028	<0.028	<0.056	0.0001	<0.028	<0.00011
	MW22-ROX-041014-DUP	4/10/2014		43.15	NE	<0.028	<0.0018 U	<0.028	<0.056	<0.00011	0.00012	<0.028		<0.00011	<0.028	0.0199	0.0322	0.0159 J	0.038 J	<0.056	<0.028	<0.028	<0.028	<0.056	0.0001	<0.028	<0.00011
	MW22-ROX-071414	7/14/2014		41.85	NE	<0.0054	<0.00057 U	<0.0054	<0.011	<0.00011	0.00015	<0.0054		<0.00011	<0.0054	0.0198	0.0355	0.0102 J	0.0204	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00018 U	<0.0054	<0.00011
	MW22-ROX-101014	10/10/2014	37.88 - 47.88	41.43	NE	<0.0063	<0.0063	<0.0063	<0.013	<0.00013	0.00014	<0.0063		<0.00013	<0.0063	0.0193	0.0339	0.0064 J	0.011 J	<0.013	<0.0063	<0.0063	<0.0063	<0.013	0.00036	0.0079	<0.00013
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.0052	0.00049 J	<0.0052	<0.01	0.000088 J	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	0.00015 J	<0.01	<0.01	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	<0.000052	<0.0052 UJ	0.000066 J
	MW24-ROX-071113	7/11/2013		40.35	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022 UJ	0.000062 J			<0.011 UJ	<0.0054	<0.0054	<0.0054		<0.000038 U		<0.00011
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW24-ROX-011514	1/15/2014		43.47	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW24-ROX-040914	4/9/2014		44.13	NE	<0.0056	<0.00092 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	MW24-ROX-071114	7/10/2014		42.97	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW24-ROX-100814	10/8/2014	38.89 - 48.89	42.16	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
MW-25	MW25-ROX-102114	10/21/2014	35.59 - 45.59	36.44	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.00093 J	0.00057 J	0.0011 J	0.0028 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000033 J	0.173	<0.00011
MW-26	MW26-ROX-102114	10/21/2014	38.15 - 48.15	39.43	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
MW-27	MW27-ROX-102114	10/21/2014	39.79 - 49.79	41.57	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.0021	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
MW-28	MW28-ROX-102114	10/21/2014	33.61 - 43.61	36.44	NE	<0.0053	0.00026 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00075 J	<0.0021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000017 J	<0.0053	<0.00011
P-54	P54-ROX-011712	1/17/2012	38.00 - 63.00	37.17	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.000081 U	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P54-ROX-050412	5/4/2012		38.77	NE	<0.0051	<0.00085 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0026 J	<0.0001
	P54-ROX-080212	8/2/2012		38.95	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P54-ROX-103012	10/30/2012		40.70	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	<0.000051	<0.0051 UJ	<0.0001
	P54-ROX-011113	1/11/2013		41.56	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000032 J	<0.0053	<0.00011
	P54-ROX-041013	4/10/2013		41.80	NE	<0.0057 UJ	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	P54-ROX-050313	5/3/2013		41.80	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
	P54-ROX-071113	7/11/2013		39.07	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021 UJ	0.000083 J	<0.01	<0.01	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01	<0.000049 U	<0.0052 UJ	<0.0001
	P54-ROX-100813	10/8/2013		39.94	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.00023	<0.00023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
	P54-ROX-011514	1/15/2014		42.20	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	P54-ROX-040914	4/9/2014		42.80	NE	<0.006	<0.00062 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	<0.00024	<0.00024	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	<0.00006	<0.006	<0.00012
	P54-ROX-071114	7/10/2014		41.71	NE	<0.0054	<0.00028 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00011 J	0.00013 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000051 U	<0.0054	<0.00011
	P54-ROX-100814	10/8/2014	38.00 - 63.00	40.88	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011
P-55	P55-ROX-011912	1/19/2012	39.82 - 64.82	41.09	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00038	<0.0052		<0.0001	<0.0052	0.0048	0.0076	<0.01	<0.01	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01	0.00039	<0.0052	<0.0001
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00032	<0.0054		0.00011	<0.0054	0.0046	0.0076	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.00036	0.0029 J	<0.00011
	P55-ROX-050912	5/9/2012		42.44	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00069	<0.0051		<0.0001	<0.0051	0.0118	0.0179	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00066	<0.0051	<0.0001
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.01	<0.01	<0.01	<0.001	<0.0001	0.00133	<0.002		<0.0001	<0.01		0.042	<0.01	<0.01	<0.002	<0.004	<0.02	<0.003	<0.004	0.00211	0.004 J	<0.0001
	P55-ROX-012113	1/21/2013		43.60	NE	<0.0051	0.00069 J	<0.0051	<0.01	<0.0001	0.00093	<0.0051		<0.0001	<0.0051	0.0176	0.0254	<0.01	0.0018 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0017	0.0034 J	<0.0001
	P55-ROX-041513	4/15/2013		43.63	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.0013	<0.0052		<0.0001	<0.0052	0.0268	0.0389	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0021	<0.0052	<0.0001
	P55-ROX-071613	7/16/2013		40.06	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.0015	<0.0056		<0.00011	<0.0056	0.0244	0.0353	<0.011 UJ	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.0019	0.0048 J J	<0.00011
	P55-ROX-101013	10/10/2013		41.67	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.0014	<0.0055		<0.00011	<0.0055	0.0279	0.0415	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0017	0.002 J	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
			Screening Values (mg/L)				0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-56	P56-ROX-011912	1/19/2012	40.82 - 65.82	41.81	NE	<0.0051	<0.00044 U	<0.0051	<0.01	<0.0001	0.00046	<0.0051		<0.0001	<0.0051	0.0186	0.024	<0.01	<0.01	<0.01 UJ	<0.0051	<0.0051	<0.0051	<0.01	0.0012	<0.0051	0.000036 J
	P56-ROX-050812	5/8/2012		43.09	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00033	<0.0052		<0.0001	<0.0052	0.0186	0.0236	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0011	<0.0052	<0.0001
	P56-ROX-080612	8/6/2012		43.60	NE	<0.0051	<0.00075 U	<0.0051	<0.01	<0.0001	0.0003	<0.0051		<0.0001	<0.0051	0.0143	0.0178	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0013	<0.0051	<0.0001
	P56-ROX-103112	10/31/2012		44.80	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00046	<0.0051		<0.0001	<0.0051	0.024	0.0307	<0.01	0.0011 J	<0.01	<0.0051	<0.0051 UJ	<0.0051	<0.01	0.0013	<0.0051 UJ	<0.0001
	P56-ROX-011713	1/17/2013		45.65	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00032	<0.005		<0.0001	<0.005	0.0147	0.0131	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.0012	0.0014 J	<0.0001
	P56-ROX-041213	4/12/2013		46.12	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00032	<0.0055		<0.00011	<0.0055	0.0208	0.0239	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0012	<0.0055	<0.00011
	P56-ROX-071513	7/15/2013		43.25	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00059	<0.0055		<0.00011	<0.0055	0.0315	0.0431	<0.011 UJ	0.0064 J	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0015	<0.0055 UJ	<0.00011
	P56-ROX-101013	10/10/2013		44.48	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.00044	<0.0055		<0.00011	<0.0055	0.0251	0.03	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.0013	<0.0055	<0.00011
	P56-ROX-012214	1/22/2014		46.35	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00035	<0.0052		<0.0001	<0.0052	0.0193	0.0228	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0012	<0.0052	<0.0001
	P56-ROX-041414	4/14/2014		47.32	NE	<0.0059	0.00051 J	<0.0059	<0.012	<0.00012	0.00038	<0.0059		<0.00012	<0.0059	0.0223	0.0269	<0.012	0.0008 J	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.0012	<0.0059	<0.00012
	P56-ROX-070814	7/8/2014		45.97	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00036	<0.0056		<0.00011	<0.0056	0.0181	0.0243	<0.011	0.0165	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.001	<0.0056	<0.00011
	P56-ROX-101314	10/13/2014	40.82 - 65.82	45.05	NE	<0.0054	<0.00035 U	<0.0054	<0.011	<0.00011	0.00041	<0.0054		<0.00011	<0.0054	0.0235	0.0296	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0015	<0.0054	<0.00011
P-57	P57-ROX-021312	2/13/2012	40.46 - 65.46	42.13	NE	<0.0051	<0.00046 U	<0.0051	<0.01	<0.0001	0.00087	<0.0051		<0.0001	<0.0051		0.0403	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00051	0.297	<0.0001
	P57-ROX-050712	5/7/2012		42.92	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00045	<0.0052		<0.0001	<0.0052	0.0169	0.0212	<0.01	0.0023 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00035	0.141	<0.0001
	P57-ROX-080612	8/6/2012		43.53	NE	<0.005	<0.00087 U	<0.005	<0.01	<0.0001	0.0006	<0.005		<0.0001	<0.005	0.0244	0.0326	<0.01	0.0013 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00053	0.0697 J	<0.0001
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.005	<0.00089 U	<0.005	<0.01	<0.0001	0.00063	<0.005		<0.0001	<0.005	0.0242	0.0321	<0.01	0.0013 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00054	0.0921 J	<0.0001
	P57-ROX-110512	11/5/2012		44.98	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00062	<0.005		0.00005 J	<0.005	0.0249	0.0305	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00048	0.0547 J	<0.0001
	P57-ROX-012913	1/29/2013		45.92	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	0.00094	<0.0059		<0.00012	<0.0059	0.0369	0.0447	<0.012	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.012	0.00074	<0.0059 UJ	<0.00012
	P57-ROX-041113	4/11/2013		46.29	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00076	<0.0051		<0.0001	<0.0051	0.0348	0.0453	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00074	0.146	<0.0001
	P57-ROX-071613	7/16/2013		43.38	NE	<0.0056	<0.0056	<0.0056	<0.011	0.000038 J	0.0008	<0.0056		<0.00011	<0.0056	0.0267	0.0365	<0.011 UJ	0.0086 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00073	0.164 J	<0.000052 U
	P57-ROX-101413	10/14/2013		44.38	NE	<0.0054	0.00049 J	<0.0054	<0.011	<0.00011	0.00067	<0.0054		<0.00011	<0.0054	0.0252	0.0324	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00049	0.202	0.000047 J
	P57-ROX-020314	2/3/2014		46.57	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	0.00062	<0.0053		<0.00011	<0.0053	0.0234	0.0314	<0.011	0.0027 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00052	0.168 J	<0.00011
	P57-ROX-041514	4/15/2014		46.70	NE	<0.0056	<0.00058 U	<0.0056	<0.011	<0.00011	0.00061	<0.0056		<0.00011	<0.0056	0.0238	0.032	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00045 J	0.106 J	<0.00011
	P57-ROX-070814	7/8/2014		45.95	NE	<0.0053	0.00026 J	<0.0053	<0.011	<0.00011 UJ	0.00055	<0.0053	0.024 JN	<0.00011	<0.0053	0.022	0.0306	<0.011	0.0303	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00047	0.141	<0.00011
	P57-ROX-070814-DUP	7/8/2014		45.95	NE	<0.0054	0.00027 J	<0.0054	<0.011	<0.00011 UJ	0.00054	<0.0054	0.023 JN	<0.00011	<0.0054	0.022	0.03	<0.011	0.0299	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00048	0.136	<0.00011
	P57-ROX-101414-DUP	10/14/2014	40.46 - 65.46	45.00	NE	<0.0058	<0.00082 U	<0.0058	<0.012	<0.00012	0.00065	<0.0058		<0.00012	<0.0058	0.0243	0.0338	<0.012	0.0138	<0.012	<0.0058	<0.0058	<0.0058	<0.012	0.00058	0.271 J	<0.00012
	P57-ROX-101414	10/14/2014		45.00	NE	<0.0056	<0.00086 U	<0.0056	<0.011	<0.00011	0.00068	<0.0056		<0.00011	<0.0056	0.026	0.0345	<0.011	0.0152	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00059	0.274 J	<0.00011
P-58	P58-ROX-011912	1/19/2012	40.21 - 65.21	39.73	NE	<0.0053	<0.00057 U	<0.0053	<0.011	0.000047 J	0.0017	<0.0053		<0.00011	<0.0053	0.0639	0.0904	<0.011	0.0171	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.00084	0.259	0.00012
	P58-ROX-011912-D	1/19/2012		39.73	NE	<0.0053	<0.00059 U	<0.0053	<0.011	0.000052 J	0.0018	<0.0053		<0.00011	<0.0053	0.0588	0.0821	<0.011	0.0156	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011	0.0008	0.225	0.00012
	P58-ROX-050712	5/7/2012		40.90	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.0009 J	<0.0051		<0.0001	<0.0051	0.0351 J	0.0435 J	<0.01	0.0181	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00056 J	0.161	0.0001
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00067 J	<0.0052		<0.0001	<0.0052	0.0267 J	0.0338 J	<0.01	0.0122	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00041 J	0.147	0.000076 J
	P58-ROX-080612	8/6/2012		41.63	NE	<0.005	<0.00053 U	<0.005	<0.01	0.000068 J	0.0014	<0.005		<0.0001	<0.005	0.0524	0.0691	<0.01	0.0146	<0.01	<0.005	<0.005	<0.005	<0.01	0.001	0.15	<0.0001 UJ
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	<0.005	<0.00063 U	<0.005	<0.01	0.000066 J	0.0015	<0.005		<0.0001	<0.005	0.0596	0.079	<0.01	0.0195	<0.01	<0.005	<0.005	<0.005	<0.01	0.0011	0.19	0.00021 J
	P58-ROX-110612	11/6/2012		43.09	NE																					
	P58-ROX-121012	12/10/2012		43.09	NE	<0.0054 UJ	<0.0054	<0.0054	<0.011	<0.00011	0.0014	<0.0054		<0.00011	<0.0054	0.0616	0.0807	<0.011	0.0124	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00085	0.178	0.00012
	P58-ROX-012213	1/22/2013		44.21	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00024	0.003	<0.0054		0.000072 J	<0.0054	0.068	0.0846	<0.011	0.0198	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0023	0.208	0.00077
	P58-ROX-041113	4/11/2013		44.40	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00019	0.0022	<0.0054		<0.00011	<0.0054	0.0692	0.0961	<0.011	0.014	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0021	0.0985	0.00055
	P58-ROX-071613	7/16/2013		41.49	NE	<0.0055	<0.0055	<0.0055	<0.011	0.000071 J	0.0013	<0.0055		<0.00011	<0.0055	0.0544	0.0708	<0.011 UJ	0.0359	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00099	0.247	<0.0002 U
	P58-ROX-101413	10/14/2013		42.19	NE	<0.0054	0.00058 J	<0.0054	<0.011	0.000066 J	0.0014	<0.0054		<0.00011	<0.0054	0.0488	0.0628	<0.011	0.0481	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00095	0.213	0.00021
	P58-ROX-020314	2/3/2014		44.66	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000058 J	0.0011	<0.0052		<0.0001	<0.0052	0.0353	0.0474	<0.01	0.0073 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00069	0.123 J	0.00014
	P58-ROX-041514	4/15/2014		45.66	NE	<0.0053 UJ	<0.0013 U	0.00072 J	<0.011 UJ	0.00079	0.0017	0.00088 J		0.00072	<0.0053 UJ	0.0284	0.0381	<0.011 UJ	0.0136 J	<0.011 UJ	<0.0053	0.0021 J J	<0.0053 UJ	<0.011 UJ	0.0013	0.123 J	0.00085
	P58-ROX-071814	7/18/2014		43.80	NE	<0.0055	<0.00032 U	<0.0055	<0.011	0.000062 J	0.0012	<0.0055		0.0005	<0.0055	0.0412	0.0554	<0.011	0.012	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00092	0.173	0.00022
	P58-ROX-101514	10/15/2014	40.21 - 65.21	43.14	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000064 J	0.0015	<0.0054		<0.00011	<0.0054	0.0504	0.0674	<0.011	0.0237	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.001	0.145	0.00024

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-59	P59-ROX-011912	1/19/2012	47.91 - 72.91	42.88	NE	<0.0057	<0.0005 U	<0.0057	<0.011	0.000073 J	0.0008	<0.0057		<0.00011	<0.0057	0.0175	0.0279	0.0045 J	0.0092 J	<0.011 UJ	<0.0057	<0.0057	0.00079 J	<0.011	0.00081	0.0906 J	0.00013
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	<0.0051	<0.00041 U	<0.0051	<0.01	0.000073 J	0.00063	<0.0051		<0.0001	<0.0051	0.0178	0.029	<0.01	0.0076 J	<0.01 UJ	<0.0051	<0.0051	0.00087 J	<0.01	0.00081	0.0646 J	0.00013
	P59-ROX-050912	5/9/2012		44.11	NE	<0.005	<0.005	<0.005	<0.01	0.000062 J	0.00034	<0.005	0.0056 JN	<0.0001	<0.005	0.0117	0.018	<0.01	0.0062 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00053	0.0241	0.000092 J
	P59-ROX-080212	8/2/2012		44.07	NE	<0.0053	<0.0053	<0.0053	<0.011	0.00015	0.00048	<0.0053		<0.00011	<0.0053	0.0136	0.0207	0.0018 J	0.0032 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.001	0.0419	0.00021
	P59-ROX-110212	11/2/2012		45.98	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000063 J	0.0005	<0.0053		<0.00011	<0.0053	0.0187	0.0282	0.0065 J	0.0137	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00075	0.0766 J	0.00009 J
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.0052	<0.0052	<0.0052	<0.01	0.000066 J	0.00048	<0.0052		<0.0001	<0.0052	0.0179	0.0268	0.0056 J	0.0116	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00073	0.0656 J	0.000093 J
	P59-ROX-013013	1/30/2013		46.60	NE	<0.0052 UJ	0.0022 J	<0.0052	<0.01	<0.000079 U	0.00069	<0.0052		<0.0001	<0.0052	0.0222	0.0305	0.154	0.107	<0.01 UJ	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.001	0.141 J	<0.00011 U
	P59-ROX-041213	4/12/2013		46.95	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000077 J	0.00064	<0.0054		<0.00011	<0.0054	0.0247	0.0369	0.174	0.0842	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0012	0.119	0.000098 J
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000078 J	0.00065	<0.0053		<0.00011	<0.0053	0.0265	0.0383	0.154	0.0794	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0012	0.101	0.0001 J
	P59-ROX-071613	7/16/2013		44.13	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000061 J	0.00063	<0.0054		<0.00011	<0.0054	0.0189	0.0302	0.17	0.042	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00087	0.121 J	<0.000078 U
	P59-ROX-101013	10/10/2013		45.50	NE	<0.0054	<0.0054	0.00091 J	<0.011	0.00015	0.0007	<0.0054		<0.00011	<0.0054	0.0192	0.0305	0.201	0.0528	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0014	0.0524	0.00028
	P59-ROX-020314	2/3/2014		47.35	NE	<0.0052	<0.0052	<0.0052	<0.01	0.00012	0.00067	<0.0052		<0.0001	<0.0052	0.0141	0.0214	0.31 J	0.0142	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0014	0.0444 J	0.00019
	P59-ROX-041514	4/15/2014		48.60	NE	<0.0053	<0.0053	<0.0053	<0.011	0.00015	0.00066	<0.0053		<0.00011	<0.0053	0.0233	0.0317	<0.011	0.0186 J	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	0.0016	0.13 J	0.0003
	P59-ROX-070814	7/8/2014		47.69	NE	<0.0057	0.00045 J	<0.0057	<0.011	0.000053 J J	0.00046	<0.0057		<0.00011	<0.0057	0.0181	0.0291	0.0793	0.0184	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.00088	<0.0057	0.0001 J
	P59-ROX-101414	10/14/2014	47.91 - 72.91	46.18	NE	<0.0054	<0.00042 U	<0.0054	<0.011	<0.00054	0.00087	<0.0054		<0.00054	<0.0054	0.0268	0.0425	0.0387	0.0092 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0015	0.0361	<0.00054
P-66	P66-ROX-051012	5/10/2012	34.72 - 59.72	32.48	NE	<0.005	0.00054 J	<0.005	<0.01	0.000056 J	0.0015	<0.005		<0.0001	<0.005	0.0647	0.025	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00057	<0.005	0.000082 J
	P66-ROX-080312	8/3/2012		30.51	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000082 J	0.0011	<0.0053		<0.00011	<0.0053	0.0541	0.028	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00057	<0.0053	0.00013
	P66-ROX-103112	10/31/2012		34.75	NE	<0.005	<0.005	<0.005	<0.01	<0.000051 U	0.0017	<0.005		<0.0001	<0.005	0.0689	0.0268	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	0.00054	<0.005 UJ	<0.00007 U
	P66-ROX-011813	1/18/2013		35.70	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	0.000076 J	0.0019	<0.0053		<0.00011	<0.0053	0.0655	0.0315	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00082	0.0019 J	0.00011
	P66-ROX-041113	4/11/2013		36.03	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000072 J	0.0017	<0.0053		<0.00011	<0.0053	0.0681	0.0131	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00091	<0.0053	0.000087 J
	P66-ROX-071213	7/12/2013		33.20	NE	<0.0056 UJ	<0.0056	<0.0056	<0.011	<0.00019 U	0.0018	<0.0056		0.00017	<0.0056	0.0688	0.0642	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00088	0.0035 J J	<0.0002 U
	P66-ROX-101013	10/10/2013		33.66	NE	<0.0056	<0.0056	<0.0056	<0.011	0.000052 J	0.0013	<0.0056		<0.00011	<0.0056	0.0571	0.0218	<0.011	0.0034 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.0005	<0.0056	0.00009 J
	P66-ROX-110713	11/7/2013		33.66	NE																					
	P66-ROX-012914	1/29/2014		36.39	NE	<0.0053	<0.0053	<0.0053	<0.011	0.000065 J	0.0016	<0.0053		0.000041 J	<0.0053	0.0701	0.0284	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00077	<0.0053	0.000099 J
	P66-ROX-041114	4/11/2014		37.10	NE	<0.0058	<0.00088 U	<0.0058	<0.012	<0.00012	0.0013	<0.0058		<0.00012	<0.0058	0.0649	0.023	<0.012	<0.012	<0.012	<0.0058	<0.0058	<0.0058	<0.012	0.00049	<0.0058	0.000049 J
	P66-ROX-070714	7/7/2014		35.60	NE	<0.0056	0.0003 J	<0.0056	<0.011	<0.00011	0.00078	<0.0056		<0.00011	<0.0056	0.0445	0.006	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00041 J	<0.0056	<0.00011
	P66-ROX-101414	10/14/2014	34.72 - 59.72	34.48	NE	<0.0055	<0.00066 U	<0.0055	<0.011	<0.00011	0.0011	<0.0055		<0.00011	<0.0055	0.0595	0.0075	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00064	<0.0055	0.000043 J
P-74	P74-ROX-011912	1/19/2012	44.43 - 69.43	38.77	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095 UJ	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	0.002 J	<0.000095
	P74-ROX-050712	5/7/2012		39.92	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.00016 J	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000047 J	0.0089	<0.0001
	P74-ROX-080612	8/6/2012		40.71	NE	<0.005	<0.00082 U	<0.005	<0.01	<0.0001	0.00021	<0.005		<0.0001	<0.005	0.009	0.0103	0.0014 J	0.001 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00012 U	0.0158	<0.0001
	P74-ROX-110112	11/1/2012		41.72	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.0003	<0.0052		<0.0001	<0.0052	0.0123	0.0136	0.0054 J	0.002 J	<0.01	<0.0052	<0.0052 UJ	<0.0052	<0.01	0.00013	0.0307 J	<0.0001
	P74-ROX-011713	1/17/2013		42.65	NE	<0.0051	<0.0051	<0.0051	<0.01	0.000038 J	0.00038	<0.0051		<0.0001	<0.0051	0.0156	0.0198	<0.01	0.001 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00023	0.0298	0.000048 J
	P74-ROX-041113	4/11/2013		42.83	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0046 U	<0.0001
	P74-ROX-071513	7/15/2013		40.11	NE	<0.0054	<0.0054	<0.0054	<0.011	0.00014	0.00011	<0.0054		<0.00011	<0.0054	0.0019	0.00019 J	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00008 U	0.008	0.000074 J
	P74-ROX-101413	10/14/2013		41.72	NE	<0.0054	0.00047 J	<0.0054	<0.011	0.00015	0.00025	<0.0054		<0.00011	<0.0054	0.0073	0.0079	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.000079	0.0125	0.000057 J
	P74-ROX-012414	1/24/2014		43.35	NE	<0.0051	0.00048 J	<0.0051	<0.01	0.000088 J	0.00028	<0.0051		<0.0001	<0.0051	0.0088	0.0106	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.00014 U	0.0278	0.000049 J
	P74-ROX-041514	4/15/2014		44.74	NE	<0.0059	<0.0014 U	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.0017 J	0.0022 J	<0.012	<0.012	<0.012	<0.0059	<0.0059 UJ	<0.0059	<0.012	0.000054 JB J	<0.0059 UJ	<0.00012
	P74-ROX-070814	7/8/2014		43.02	NE	<0.0057	0.00039 J	<0.0057	<0.011	<0.00011	0.00011	<0.0057		<0.00011	<0.0057	0.0034	0.003	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	0.000054 J	<0.0057	<0.00011
	P74-ROX-101414	10/14/2014	44.43 - 69.43	41.48	NE	<0.005	<0.0019 U	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.002	<0.002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001

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						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
P-93A	P93A-ROX-012012	1/20/2012	48.17 - 63.17	41.66	NE	<0.0048	<0.00038 U	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	0.0133	0.0188	<0.0095	0.0029 J	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.00022 U	0.234	<0.000095
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00021	<0.0051		<0.0001	<0.0051	0.0121	0.0151	<0.01	0.0014 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.00021	<0.0051	<0.0001
	P93A-ROX-080912	8/9/2012		43.66	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00021	<0.0054		<0.00011	<0.0054	0.0097	0.013	<0.011	0.00096 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00025	0.208	<0.00011
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00029	<0.0052		<0.0001	<0.0052	0.015	0.0194	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00028 B	0.19	<0.0001
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	0.00037	<0.0052		<0.0001	<0.0052	0.016	0.0206	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00034 B	0.217	<0.0001
	P93A-ROX-012313	1/23/2013		45.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00021	<0.0052		<0.0001	<0.0052	0.0096	0.0093	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00024	0.168	<0.0001
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.0001	0.00019	<0.0052		<0.0001	<0.0052	0.0094	0.009	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.00023	0.165	<0.0001
	P93A-ROX-041113	4/11/2013		46.29	NE	<0.005	<0.005	<0.005	<0.01	0.000046 J	0.0003	<0.005		<0.0001	<0.005	0.0146 J	0.0098	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00035	0.2	0.00004 J
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00025	<0.005		<0.0001	<0.005	0.0146 J	0.0096	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00024	0.179	<0.0001
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	0.00023	<0.0056		<0.00011	<0.0056	0.0089	0.0062	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00021	0.107	<0.00011
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00028	<0.005		<0.0001	<0.005	0.0128	0.0085	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00013	0.0837 J	<0.0001
	P93A-ROX-012914	1/29/2014		46.53	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00032	<0.0054		<0.00011	<0.0054	0.0133	0.0072	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00022 B	0.105	<0.00011
	P93A-ROX-041714	4/17/2014		47.41	NE	<0.0056	<0.0012 U	<0.0056	<0.011	<0.00011	0.00027	<0.0056		<0.00011	<0.0056	0.0086	0.0048	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00018 B J	0.0735	<0.00011
	P93A-ROX-071814	7/18/2014		45.70	NE	<0.0057	<0.00077 U	<0.0057	<0.011	<0.00011	0.00024	<0.0057		<0.00011	<0.0057	0.0084	0.0053	<0.011	<0.011	<0.011	0.0059	<0.0057	<0.0057	<0.011	0.00017 B	0.0355	<0.00011
	P93A-ROX-071814-DUP	7/18/2014		45.70	NE	<0.0057	<0.00041 U	<0.0057	<0.011	<0.00011	0.00025	<0.0057		<0.00011	<0.0057	0.0095	0.0062	<0.011	<0.011	<0.011	0.0052 J	<0.0057	<0.0057	<0.011	0.00017 B	0.0396	<0.00011
	P93A-ROX-101514	10/15/2014	48.17 - 63.17	45.06	NE	<0.0052	0.00024 J	<0.0052	<0.01	<0.0001	0.00037	<0.0052		<0.0001	<0.0052	0.0114	0.0095	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0003	0.0471	<0.0001
	P93A-ROX-101514-DUP	10/15/2014		45.06	NE	<0.0054 UJ	0.00046 J J	<0.0054 UJ	<0.011 UJ	<0.00011 UJ	0.00039 J	<0.0054 UJ		<0.00011 UJ	<0.0054 UJ	0.0122 J	0.0101 J	<0.011 UJ	<0.011 UJ	<0.011 UJ	0.0011 J J	<0.0054 UJ	<0.0054 UJ	<0.011 UJ	0.0003 J	0.05 J	<0.00011 UJ
P-93B	P93B-ROX-012012	1/20/2012	74.60 - 76.60	41.72	NE	<0.0048	<0.0048	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	<0.00019	<0.00019	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	0.107	<0.000095
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	0.178	<0.00011
	P93B-ROX-110712	11/7/2012		45.05	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	0.00026	0.00045 B	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.13	<0.0001
	P93B-ROX-110712-DUP	11/7/2012		45.05	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0003	0.0005 B	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.114	<0.0001
	P93B-ROX-012313	1/23/2013		45.89	NE	0.00024 J J	0.003 J	<0.0053	<0.011	0.00013	0.00012	0.00058 J		0.00012	<0.0053	<0.00021	0.00012 J	<0.011	0.0014 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00016	0.176	0.00013
	P93B-ROX-041113	4/11/2013		46.32	NE	<0.0051	0.0013 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.122	<0.0001
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.0056	0.0005 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000034 J	0.151	<0.00011
	P93B-ROX-101613	10/16/2013		44.43	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.069	<0.0001
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.082	<0.0001
	P93B-ROX-012814	1/28/2014		46.58	NE	<0.0055	0.00045 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000022 U	0.074	<0.00011
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<0.0051	0.00048 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000024 U	0.0927	<0.0001
	P93B-ROX-041714	4/17/2014		47.46	NE	<0.0051	<0.0024 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.0719	<0.0001
	P93B-ROX-041714-DUP	4/17/2014		47.46	NE	<0.0053	<0.00098 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	0.0861	<0.00011
	P93B-ROX-071714	7/17/2014		45.75	NE	<0.0052	<0.00046 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000023 U	<0.0052 UJ	<0.0001
	P93B-ROX-101514	10/15/2014	74.60 - 76.60	45.15	NE	<0.0056	0.00024 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	0.128	<0.00011
P-93C	P93C-ROX-012012	1/20/2012	94.26 - 96.26	41.57	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.0055 UJ	0.0025 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000026 J	0.0352	<0.00011
	P93C-ROX-080813	8/8/2013		43.31	NE																					
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	0.005 J	<0.0001
	P93C-ROX-012414	1/24/2014		46.44	NE	<0.0051	0.00051 J	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93C-ROX-041714	4/17/2014		47.34	NE	<0.0052	<0.00048 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052 UJ	<0.0001
	P93C-ROX-071714	7/17/2014		45.61	NE	<0.0052	<0.00035 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000024 U	<0.0087 UJ	<0.0001
	P93C-ROX-101514	10/15/2014	94.26 - 96.26	44.99	NE	<0.0056	<0.0056	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00011

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TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
				Screening Values (mg/L)			0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
P-93D	P93D-ROX-012012	1/20/2012	125.75 - 127.75	41.77	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00006 U	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0004	<0.00042 U	0.00076 J	0.0011 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000054	<0.0052	<0.0001
	P93D-ROX-110812	11/8/2012		NM	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		<0.00011	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	<0.000055	<0.0055	<0.00011
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00027	0.00036	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000042 J	<0.0053	<0.00011
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0087 U	<0.0001
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.0056 UJ	0.00045 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.00022	<0.000059 U	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	<0.000056	<0.0056 UJ	<0.00011
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.005	<0.005	<0.005	<0.01	0.000087 J	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01 UJ	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01 UJ	<0.00005	<0.005 UJ	0.000084 J
	P93D-ROX-013114	1/31/2014		46.62	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000024 U	<0.0053	<0.00011
	P93D-ROX-041414	4/14/2014		47.54	NE	<0.0053	0.00036 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00003 U	<0.0053	<0.00011
	P93D-ROX-071714	7/17/2014		45.78	NE	<0.0052	<0.00025 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000022 U	<0.0052 UJ	<0.0001
	P93D-ROX-101514	10/15/2014	125.75 - 127.75	45.14	NE	<0.0054	0.00031 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.0022	<0.0022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000019 J	0.0458	<0.00011
	P93D-ROX-110414	11/4/2014		45.14	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P-114	P114-ROX-012012	1/20/2012	32.67 - 52.67	27.17	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		0.000066 J	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	P114-ROX-050912	5/9/2012		28.09	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.00005	<0.0052	<0.0001
	P114-ROX-080912	8/9/2012		29.13	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	P114-ROX-110912	11/9/2012		30.90	NE	<0.0052	<0.0052	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P114-ROX-012313	1/23/2013		30.22	NE	<0.0053 UJ	0.0024 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	P114-ROX-041513	4/15/2013		31.80	NE	<0.0052	0.00047 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	<0.00021	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	P114-ROX-071813	7/18/2013		27.22	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	<0.00011	<0.0055		0.000071 J	<0.0055	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.000059	<0.0055	<0.00011
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.000052 J	<0.0053	<0.00011
	P114-ROX-101713	10/17/2013		29.43	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	P114-ROX-012814	1/28/2014		32.11	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	<0.00022	<0.00022	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00015 B	<0.0054	<0.00011
	P114-ROX-042114	4/21/2014		32.22	NE	<0.0051	0.0026 JB	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01 UJ	<0.000051	<0.0051	<0.0001
	P114-ROX-071814	7/18/2014		30.87	NE	<0.0051	<0.00028 U	<0.0051	<0.01	<0.0001	<0.0001	<0.0051		<0.0001	<0.0051	<0.0002	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.00012 U	<0.0051	<0.0001
	P114-ROX-101714	10/17/2014	32.67 - 52.67	29.43	NE	<0.0057	<0.0057	<0.0057	<0.011	<0.00011	<0.00011	<0.0057		<0.00011	<0.0057	<0.0023	<0.0023	<0.011	<0.011	<0.011	<0.0057	<0.0057	<0.0057	<0.011	<0.000057	<0.0057	<0.00011
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.0052	<0.00043 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0002 J	0.00017 J	<0.01	0.0087 J	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.000043 J	<0.0052	<0.0001
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.0054	0.0049 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00031	0.00038 J	<0.011	0.0056 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.000054	<0.0054	<0.00011
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.0053	0.0017 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.00028	0.00031	<0.011	0.0019 J	<0.011	<0.0053	<0.0053 UJ	<0.0053	<0.011	<0.000053	<0.0053 UJ	<0.00011
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.005 UJ	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0061	0.0087	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00068	<0.005	<0.0001
	ROST3MW-ROX-040513	4/5/2013				<0.0054	0.00044 J	<0.0054	<0.011	<0.00011	0.00017	<0.0054		<0.00011	<0.0054	0.0029	0.0039	<0.011	<0.011	<0.011	<0.0054	<0.0054 UJ	<0.0054	<0.011	0.00055	<0.0054 UJ	<0.00011
	ROST3MW-ROX-071113	7/11/2013		39.50	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00043	<0.0054		<0.00011	<0.0054	0.0105 J	0.0142	<0.011 UJ	<0.011 UJ	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011 UJ	0.00073	<0.0054 UJ	<0.000044 U
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00012	<0.0054		<0.00011	<0.0054	0.0024	0.0026	<0.011 UJ	<0.011 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.011 UJ	0.00014	<0.0054 UJ	0.000044 J
	ROST3MW-ROX-011714	1/17/2014		42.20	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.0011	0.00099	<0.011 UJ	<0.011 UJ	<0.011	<0.0053	<0.0053	<0.0053	<0.011 UJ	0.0002	<0.0053 UJ	<0.00011
	ROST3MW-ROX-041014	4/10/2014		42.80	NE	<0.006	<0.00076 U	<0.006	<0.012	<0.00012	<0.00012	<0.006		<0.00012	<0.006	0.00075	0.0008	<0.012	<0.012	<0.012	<0.006	<0.006	<0.006	<0.012	0.0001	<0.006	<0.00012
	ROST3MW-ROX-071414	7/14/2014		41.88	NE	<0.0054	<0.0004 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0054		<0.00011	<0.0054	0.00092	0.00097	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	<0.00016 U	<0.0054	<0.00011
	ROST3MW-ROX-100914	10/9/2014	37.81 - 47.81	41.31	NE	<0.0056	<0.00026 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.00075 J	0.00057 J	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00014 B	<0.0056	<0.00011

TABLE 3
CUMULATIVE SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL RESULTS AND EXCEEDANCES

						SVOCs																				
						Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene	Fluoranthene	Fluorene	Hexachlorobenzene	Indene	Indeno(1,2,3-cd)pyrene	Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	3 & 4-Methylphenol (m & p-Cresol)	3-Nitroaniline	Nitrobenzene	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
					Screening Values (mg/L)		0.7 [1]	0.14 [2]	0.00031 [2]	0.28 [1]	0.28 [1]	0.00006 [2]		0.00043 [1]	1.4 [2]	0.49 [3]	0.028 [1]	0.35 [1]	0.35 [3]		0.014 [1]	0.0006 [3]	0.0032 [2]	0.001 [1]	0.21 [3]	0.1 [1]	0.21 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.005	<0.00058 U	<0.005	<0.01	<0.0001	0.00022	<0.005		<0.0001	<0.005	0.0044	0.0049	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00082	<0.005	0.000041 J
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.0053	0.0015 J	<0.0053	<0.011	<0.000041 U	0.00032 B	<0.0053		<0.00011	<0.0053	0.0102	0.0136	<0.011	0.00098 J	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0014	0.0023 J	<0.000081 U
	ROST4PZ-ROX-102912	10/29/2012		40.75	NE	<0.0052	0.0018 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052		<0.0001	<0.0052	0.0004	0.00041	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0002	<0.0052	<0.0001
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	<0.00021	0.000064 J	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00012	<0.0053	<0.00011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.0055	<0.0055	<0.0055	<0.011	<0.00011	0.000069 J	<0.0055		<0.00011	<0.0055	0.00062	0.000078 J	<0.011	<0.011	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00018	<0.0055 U	<0.00011
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000099 J	0.00027	<0.0054		<0.00011	<0.0054	0.0027 J	0.0021	<0.011	<0.011	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011	0.00052	0.00057 J J	<0.00009 U
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.0053	<0.0053	<0.0053	<0.011	<0.00011	<0.00011	<0.0053		<0.00011	<0.0053	0.002	0.00095	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0002	<0.0053	<0.00011
	ROST4PZC-ROX-011714	1/17/2014		41.92	NE	<0.0059	<0.0059	<0.0059	<0.012	<0.00012	<0.00012	<0.0059		<0.00012	<0.0059	0.00019 J	<0.00024	<0.01 UJ	<0.01 UJ	<0.012	<0.0059	<0.0059	<0.0059	<0.01 UJ	0.000077	<0.005 UJ	<0.00012
	ROST4PZC-ROX-041014	4/10/2014		42.05	NE	<0.0056	<0.00038 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	0.000065 J	<0.00022	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000051 J	<0.0056	<0.00011
	ROST4C-ROX-071114	7/10/2014		42.22	NE	<0.0053	<0.00031 U	<0.0053	<0.011	<0.0001	<0.0001	<0.0053		<0.0001	<0.0053	0.00021	<0.0002	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00012 U	<0.0053	<0.0001
	ROST4PZC-ROX-100914	10/9/2014	34.95 - 44.95	41.30	NE	<0.0056	<0.00032 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0056		<0.00011	<0.0056	<0.0022	<0.0022	<0.011	0.00071 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000088 U	0.00088 J	<0.00011
T-12	T12-ROX-011912	1/19/2012	46.46 - 72.46	41.0	NE	<0.0056	<0.00048 U	<0.0056	<0.011	0.000044 J	0.00043	<0.0056		0.000061 J	<0.0056	0.0158	0.0186	0.00091 J	<0.011	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011	0.00054	0.0188	0.000067 J
	T12-ROX-050912	5/9/2012		42.62	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00024	<0.005		<0.0001	<0.005	0.0164	0.0254	<0.01	0.0026 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00062	0.0094	0.000039 J
	T12-ROX-080212	8/2/2012		41.92	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000046 J	0.00029	<0.0054		<0.00011	<0.0054	0.0199	0.0294	0.0021 J	0.0027 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00089	0.042	0.000062 J
	T12-ROX-110512	11/5/2012		43.91	NE	<0.005	<0.005	<0.005	<0.01	<0.0001	0.00031	<0.005		<0.0001	<0.005	0.0232	0.0354	0.00096 J	0.0015 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00083	<0.005 UJ	0.000048 J
	T12-ROX-011813	1/18/2013		44.50	NE	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.00011	0.00046	<0.0053		<0.00011	<0.0053	0.0241	0.0322	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.0011	0.0265	0.000067 J
	T12-ROX-041513	4/15/2013		44.99	NE	<0.0051	<0.0051	<0.0051	<0.01	<0.0001	0.00037	<0.0051		<0.0001	<0.0051	0.0289	0.0444	0.0047 J	0.0042 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0011	0.0149	0.000063 J
	T12-ROX-071613	7/16/2013		42.33	NE	<0.0054	<0.0054	<0.0054	<0.011	0.000044 J	0.00034	<0.0054		<0.00011	<0.0054	0.0236	0.0331	0.0029 J J	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0011	0.0514 J	<0.00009 U
	T12-ROX-101513	10/15/2013		43.73	NE	<0.0054	<0.0054	<0.0054	<0.011	<0.00011	0.00029	<0.0054		<0.00011	<0.0054	0.0199	0.0319	0.0018 J	0.0032 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00077	0.0083	0.00009 J
	T12-ROX-012414	1/24/2014		45.26	NE	<0.0051	0.00044 J	<0.0051	<0.01	<0.0001	0.00035	<0.0051		<0.0001	<0.0051	0.0215	0.0326	0.0022 J	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.001	0.0498	0.00006 J
	T12-ROX-041514	4/15/2014		46.72	NE	<0.0056	<0.00034 U	<0.0056	<0.011	<0.00011	0.0003	<0.0056		<0.00011	<0.0056	0.0189	0.0283	<0.011	<0.011	<0.011	<0.0056	<0.0056 UJ	<0.0056	<0.011	0.00078	0.0672 J	0.00005 J
	T12-ROX-070814	7/8/2014		45.13	NE	<0.0054	0.00038 J	<0.0054	<0.011	<0.00011	0.00022	<0.0054		<0.00011	<0.0054	0.015	0.0245	0.0092 J	0.0033 J	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00051	<0.0054	<0.00011
	T12-ROX-101714	10/17/2014	46.46 - 72.46	44.40	NE	<0.0056	0.00061 J	<0.0056	<0.011	<0.00011	0.00031	<0.0056		<0.00011	<0.0056	0.022	0.0369	0.003 J	0.0059 J	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.00079	0.0154	<0.00011

Notes:

1 Denotes screening critieria source from 35 I.A.C. 620, Subpart D.

2 Denotes screening critieria source from 35 I.A.C. 742 (TACO), Appendix B, Table E.

3 Denotes screening criteria source from IL EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables).

4 Beginning in 4Q12, naphthalene was analyzed via 8260 VOC, and prior historical results were reported by PAH analysis.

5 Beginning in 4Q13, professional judgment criteria used to review common laboratory contaminants was reevaluated. Acetone, 2-butanone, and methylene chloride are only U-qualified when present in the method blank.

6 The laboratory has been requested to perform a library search in all samples for butane, hexane, isopentane, 1,2,3-trimethylbenzene, and indene, which are reported as Tentatively Identified Compounds (TICs), when identified.

	Indicates a historical exceedance of screening criteria.
	Indicates a current exceedance of screening criteria.
NA	Indicates current quarter analyte result was not analyzed.
	Empty cell without a value indicates previous quarter analyte result was rejected, the analyte was not analyzed, or the TIC was not identified.

LABORATORY QUALIFIERS
B = Target analyte or common lab contaminant was identified in the method blank indicating possible field or lab contamination.
D = The result is from a diluted sample.
J = The analyte was detected below the reporting limit. Result is estimated.
E = The value exceeds calibration range.
JN = Estimated value for tentatively identified compound (library search).

URS QUALIFIERS
J = The result is estimated.
UJ = Estimated non-detect.

The following EVS Descriptions and Assumptions apply to **Figure 6.** C Tech Development Corporation's Environmental Visualization System PRO, Version 9.89 (EVS-PRO) was used to model the estimated distribution of benzene in the groundwater.

EVS Descriptions and Assumptions:

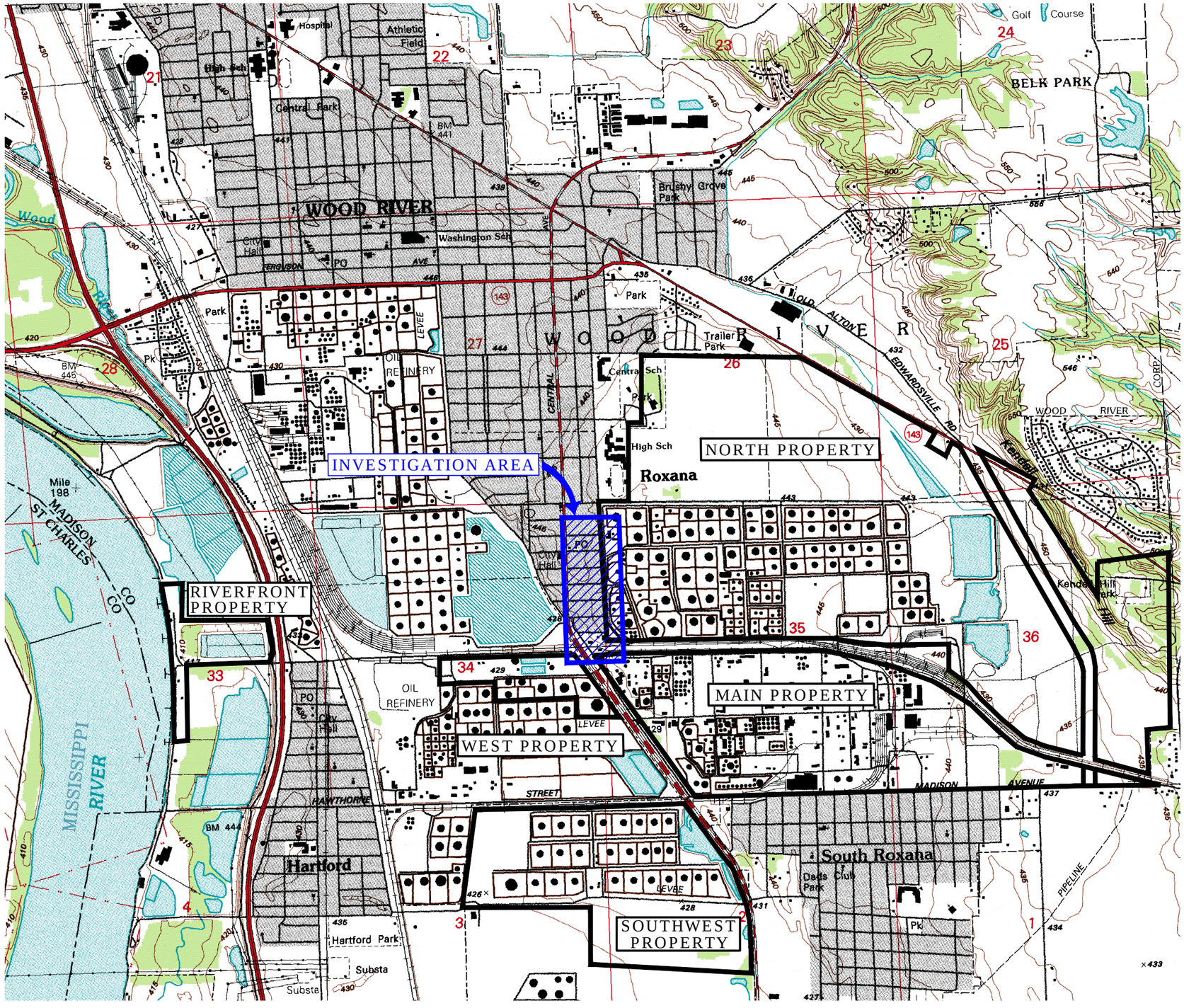
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

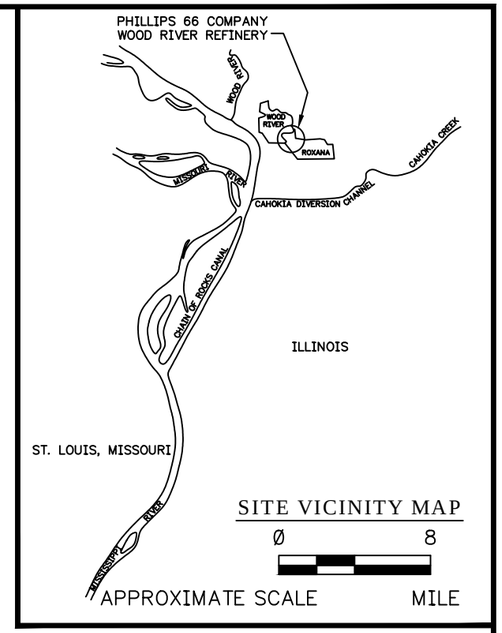
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

More simply, if each soil boring location were represented by a tack pushed into the model's surface and a rubber band stretched around them, the model would be represented by the space inside the rubber band.

Duplicate Samples – Analytical concentrations from duplicate samples collected at the same location and depth were averaged.

Detection Limits – In cases where the lab reported a non-detect, half the value of the lab detection limit was used in the model. This conservative method is based on the assumption that the soil is likely not free of benzene but the quantity contained is lower than detectable at the analyzed dilution.





LEGEND

WOOD RIVER REFINERY PROPERTY BOUNDARY

INVESTIGATION AREA

SOURCE: ELECTRONIC USGS DIGITAL RASTER GRAPHIC 7.5 MINUTE TOPOGRAPHIC MAP OF WOOD RIVER, IL–MO REVISED 1994.

CONTOUR INTERVAL = 5 FT

Ø 2000

APPROXIMATE SCALE MILE

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd January 2014 DSGN. BY: djd CHKD. BY: b3	4Q14 Investigation Area Location Map	FIG. NO. 1

File: P:\PROJECTS\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\2014 GW MONITORING\FIGURES\FIG 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 10/03/14 @ 09:33 a.m. @ WCC-ST.LOUIS

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: DEC. 11, 14 @ 3:42 p.m. by: david_deguire

LEGEND

- INTERIM GROUNDWATER MONITORING WELL LOCATION SAMPLED
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED

NOTES:

1. * INDICATES PERCHED GROUNDWATER MONITORING WELLS.
2. INSTALLATION OF GROUNDWATER MONITORING WELLS MW-25 THROUGH MW-28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14. THESE MONITORING WELLS WERE ADDED TO THE INTERIM GROUNDWATER MONITORING PROGRAM IN 4Q14.
3. GROUNDWATER MONITORING WELL MW-28 WAS SPLIT SAMPLED WITH THE VILLAGE OF ROXANA DURING 4Q14.

FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
HIGHWAY 111 (S. CENTRAL AVE)
CHAFFER ST
RAND AVENUE
WOOD RIVER REFINERY
VILLAGE OF ROXANA
BP
WEST PROPERTY
MAIN PROPERTY
1986 APPROXIMATE BENZENE RELEASE SITE

T-1, PZ-1(101), PZ-1(85), MW-9, MW-10, MW-28, P-55, MW-27, ROST-4-PZ(A), ROST-4-PZ(B), ROST-4-PZ(C), ROST-4-PZ, ROST-3-MW, ROST-4-PZ(D), ROST-4-PZ(E), P-60-S, P-60-12, *P-60-12S, ROST-4-PZ(F), ROST-4-PZ(G), P-68, A-28, T-24, MW-11, P-54, * ROST-5-PZ, P-60-13, *P-60-13S, A-33, MW-17, T-12, MW-24, MW-22, * ROST-7-PZ, P-69, A-27, P-70, MW-18, P-74, MW-19, P-59, P-61, * ROST-21-PZ, MW-16, GP-9-PZ, PZ-2(84), PZ-2(70.5), * ROST-10-PZ, MW-12, MW-20, P-56, MW-2, MW-1, T-6, MW-26, MW-21, P-57, MW-4, MW-3, P-93A, P-93B, P-93C, P-93D, P-73, MW-25, MW-5, MW-7, MW-8, P-58, P-66, P-75, MW-13, MW-6A, MW-6B, MW-6C, MW-6D, MW-14, P-114

Ø 200 SCALE FEET

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY:djd January 2015 DSGN. BY:lr CHKD. BY:b3	4Q14 Groundwater Monitoring Well Sampling Locations	FIG. NO. 2

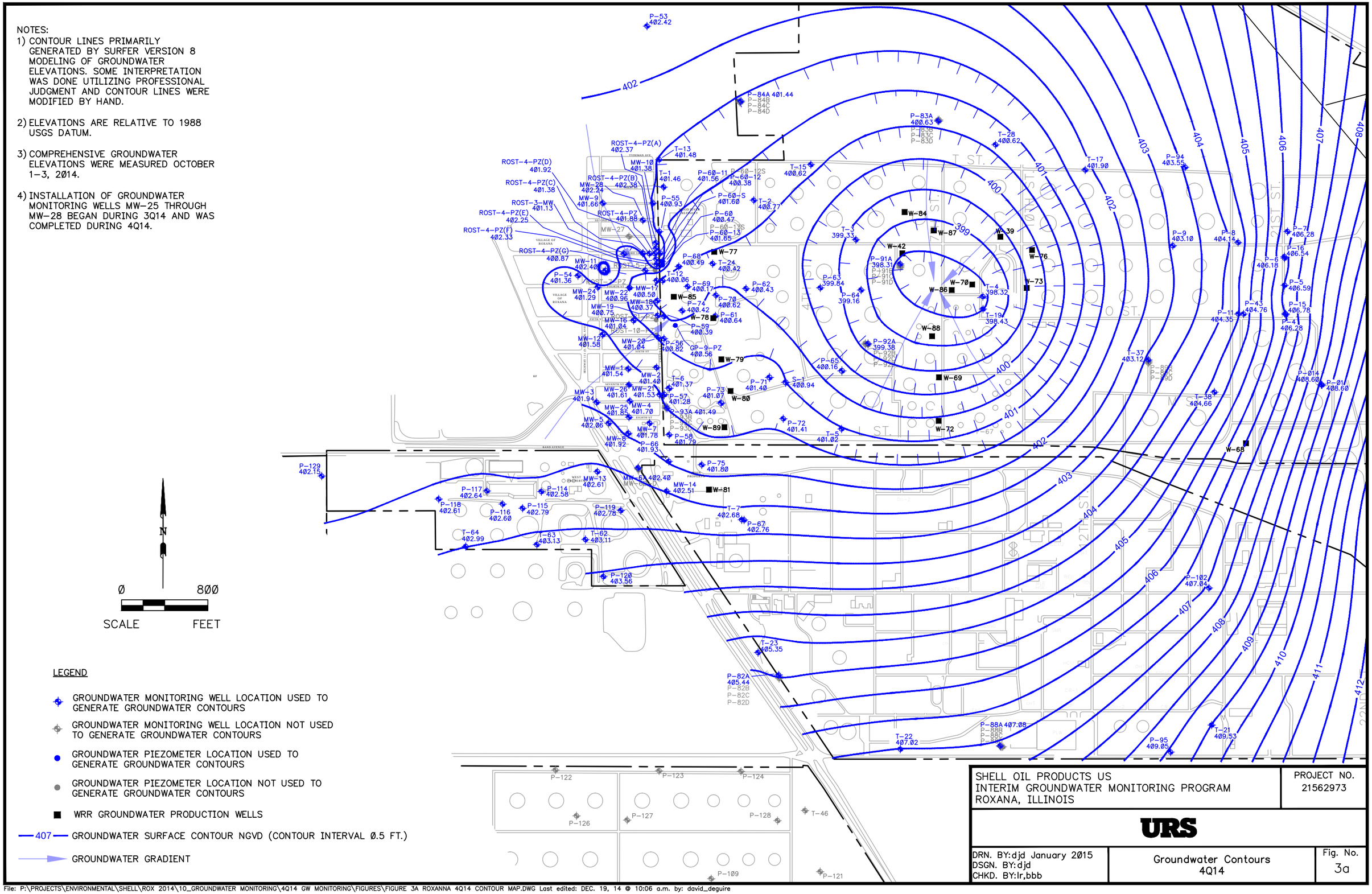
NOTES:

1) CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 8 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.

2) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.

3) COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED OCTOBER 1–3, 2014.

4) INSTALLATION OF GROUNDWATER MONITORING WELLS MW–25 THROUGH MW–28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14.



LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER PRODUCTION WELLS
- 407 GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL Ø.5 FT.)
- GROUNDWATER GRADIENT

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY:djd January 2015
DSGN. BY:djd
CHKD. BY:lr,bbb

Groundwater Contours 4Q14

Fig. No. 3a

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 3A ROXANNA 4Q14 CONTOUR MAP.DWG Last edited: DEC. 19, 14 @ 10:06 a.m. by: david_deguire

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 3B ROXANNA 4Q14 CONTOUR MAP.DWG Last edited: DEC. 19, 14 @ 10:12 a.m. by: david_deguire

LEGEND

- GROUNDWATER MONITORING WELL LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER MONITORING WELL LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION USED TO GENERATE GROUNDWATER CONTOURS
- GROUNDWATER PIEZOMETER LOCATION NOT USED TO GENERATE GROUNDWATER CONTOURS
- WRR GROUNDWATER PRODUCTION WELL
- —402— GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL Ø.5 FT)
- GROUNDWATER GRADIENT

NOTES:

1) CONTOUR LINES PRIMARILY GENERATED BY SURFER VERSION 8 MODELING OF GROUNDWATER ELEVATIONS. SOME INTERPRETATION WAS DONE UTILIZING PROFESSIONAL JUDGMENT AND CONTOUR LINES WERE MODIFIED BY HAND.

2) ELEVATIONS ARE RELATIVE TO 1988 USGS DATUM.

3) COMPREHENSIVE GROUNDWATER ELEVATIONS WERE MEASURED OCTOBER 1–3, 2Ø14.

4) INSTALLATION OF GROUNDWATER MONITORING WELLS MW–25 THROUGH MW–28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14.

FIRST ST
SECOND ST
THIRD ST
FOURTH ST
FIFTH ST
SIXTH ST
SEVENTH ST
EIGHTH ST
CHAFFER ST
HIGHWAY 111 (S. CENTRAL AVE)
RAND AVENUE
NORTH PROPERTY
WOOD RIVER REFINERY
MAIN PROPERTY
WEST PROPERTY
VILLAGE OF ROXANA
PUBLIC WORKS YARD
BP
1986 APPROXIMATE BENZENE RELEASE SITE

T-1 401.46
PZ-1(101) PZ-1(85)
MW-10 401.38
MW-9 401.66
MW-28 402.24
ROST-4-PZ(A) 402.37
P-55 400.93
MW-27
ROST-4-PZ 401.88
ROST-4-PZ(C) 401.38
ROST-4-PZ(B) 402.38
P-60-11 401.56
ROST-4-PZ(D) 401.92
P-60 400.47
ROST-3-MW 401.13
ROST-4-PZ(E) 402.25
P-60-S 401.60
P-60-12 400.38
P-60-12S
P-60-13 401.65
P-60-13S
ROST-4-PZ(F) 402.33
T-24 400.42
MW-11 402.40
ROST-4-PZ(G) 400.87
P-68 400.49
P-54 401.36
ROST-5-PZ
MW-17 400.50
MW-22 400.96
T-12 400.06
P-69 400.17
MW-24 401.29
ROST-7-PZ
MW-18 400.37
P-74 400.42
P-70 400.62
MW-19 400.75
P-59 400.39
P-61 400.64
ROST-21-PZ
MW-16 401.04
GP-9-PZ 400.56
MW-12 401.58
PZ-2(84) PZ-2(70.5)
ROST-10-PZ
P-56 400.82
MW-20 401.04
MW-1 401.54
MW-2 401.40
T-6 401.37
MW-26 401.61
MW-21 401.53
P-57 401.28
MW-4 401.70
P-93A 401.49
P-93B
P-93C
P-93D
P-73 401.07
MW-3 401.94
MW-25 401.85
MW-5 402.06
MW-8 401.92
MW-7 401.78
P-58 401.79
P-66 401.93
P-75 401.80
MW-13 402.61
402.40 MW-6A
MW-6B
MW-6C
MW-6D
MW-14 402.51
P-114 402.58
401
402
W–77
W–85
W–78
W–79
W–89
W–81
A–27
A–28

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY:djd January 2Ø15
DSGN. BY:lr
CHKD. BY:bbb

Groundwater Contours 4Q14– West Fenceline

FIG. NO. 3b

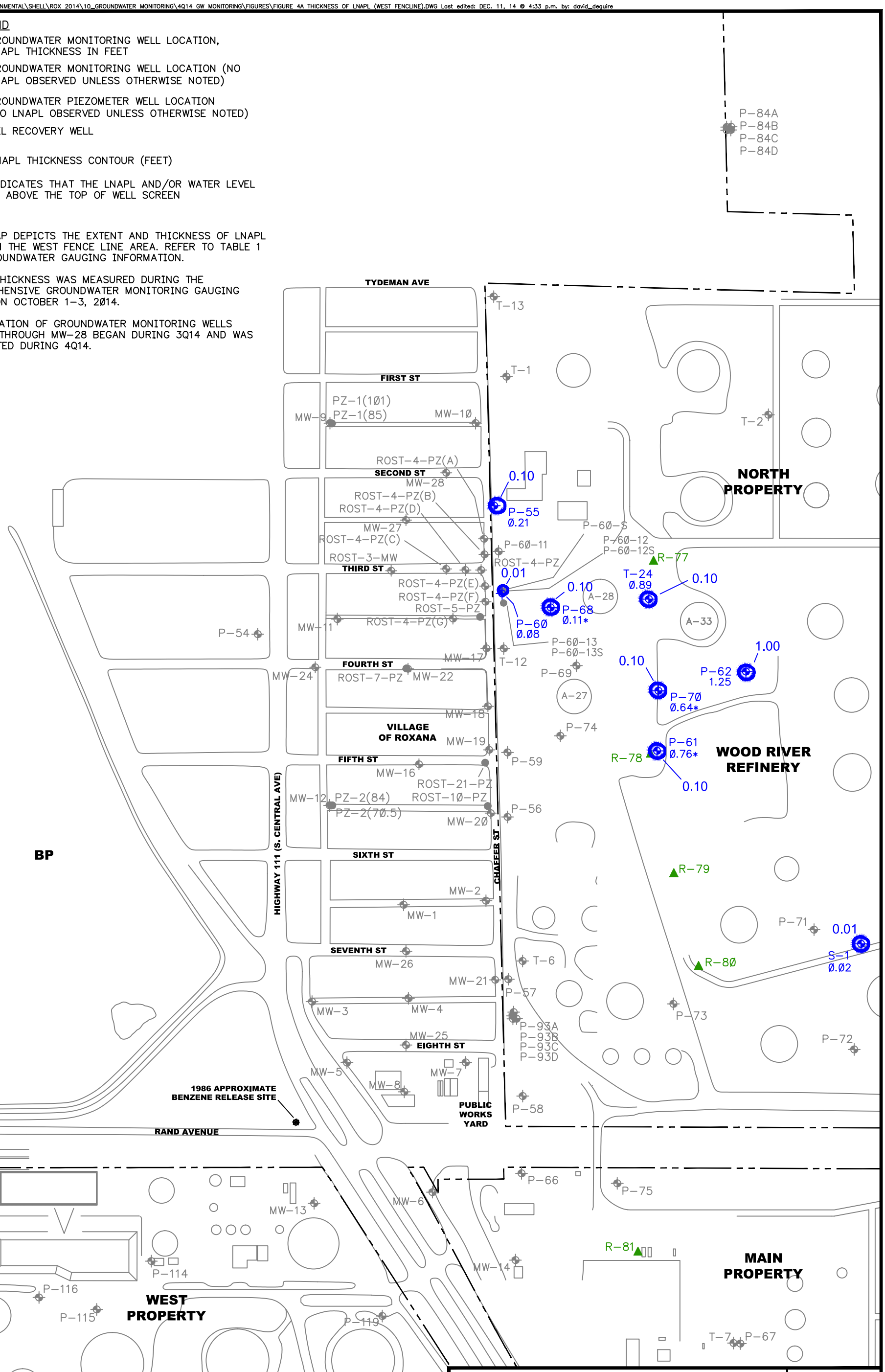
Ø 2ØØ
SCALE FEET
N

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE).DWG Last edited: DEC. 11, 14 @ 4:33 p.m. by: david_deguire

LEGEND

- GROUNDWATER MONITORING WELL LOCATION, LNAPL THICKNESS IN FEET
- GROUNDWATER MONITORING WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- GROUNDWATER PIEZOMETER WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- OIL RECOVERY WELL
- LNAPL THICKNESS CONTOUR (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN

NOTE:
1. THIS MAP DEPICTS THE EXTENT AND THICKNESS OF LNAPL BENEATH THE WEST FENCE LINE AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1–3, 2014.
3. INSTALLATION OF GROUNDWATER MONITORING WELLS MW–25 THROUGH MW–28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14.



SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY: djd January 2015 DSGN. BY:lr CHKD. BY:bbb	4Q14 Thickness of LNAPL – West Fenceline
	FIG. NO. 4a

LEGEND

- GROUNDWATER MONITORING WELL LOCATION GAUGED, LNAPL THICKNESS IN FEET
- GROUNDWATER MONITORING WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- GROUNDWATER PIEZOMETER WELL LOCATION (NO LNAPL OBSERVED UNLESS OTHERWISE NOTED)
- OIL RECOVERY WELL
- LNAPL THICKNESS CONTOUR (FEET)
- * INDICATES THAT THE LNAPL AND/OR WATER LEVEL IS ABOVE THE TOP OF WELL SCREEN

NOTES:
1. THIS MAP DEPICTS THE EXTENT AND THICKNESS OF LNAPL BENEATH THE WRR AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING A COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1–3, 2Ø14.
3. INSTALLATION OF GROUNDWATER MONITORING WELLS MW–25 THROUGH MW–28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14.

NORTH PROPERTY

BP PROPERTY

SHELL OIL COMPANY PROPERTY

WEST PROPERTY

MAIN PROPERTY

VILLAGE OF HARTFORD

VALERO PROPERTY

RAND AVE.

ILLINOIS TERMINAL RAILROAD

T ST. R ST. O ST. M ST. L ST.

7TH ST. 10TH ST. 12TH ST. 21ST ST. 22ND ST.

ROUTE 1

SCALE Ø 1ØØØ FEET

N

REFERENCE: SHELL DRAWING E–36137–12

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd January 2Ø15 DSGN. BY: lr CHKD. BY: bbb	4Q14 Thickness of LNAPL	FIG. NO. 4b

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10-GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 4b THICKNESS OF LNAPL (REFINERY).DWG Last edited: DEC. 15, 14 @ 3:59 p.m. by: david.deguire

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 5 4Q14 GROUNDWATER ANALYTICAL RESULTS SUMMARY.DWG Last edited: DEC. 11, 14 @ 4:17 p.m. by: david_deguire

LEGEND

- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER SAMPLING LOCATION
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED

NOTES:

1. PER DIRECTION FROM IEPA, ANALYTICAL RESULTS ARE SCREENED AGAINST CRITERIA OUTLINED IN THE WRR RCRA PART B PERMIT.
2. GROUNDWATER CLASS I SCREENING CRITERIA.

Analyte	Screening Criteria (mg/L)
Benzene	0.005
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Isopropylbenzene	0.7
MTBE	0.07
n-Propylbenzene	0.7
Naphthalene	0.14
Toluene	1.0
1,3,5-Trimethylbenzene	0.07
bis(2-Chloroethyl)ether	0.01
2-Methylnaphthalene	0.028
Phenol	0.1

3. J = THE TARGET ANALYTE DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
4. MULTIPLE RESULTS (e.g., 1130/984) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
5. WELLS IDENTIFIED IN BLUE WITH NO DATA BOX INDICATE THE RESULTS DID NOT EXCEED SCREENING CRITERIA.
6. WELLS P-55 AND P-68 WERE NOT SAMPLED DURING 4Q14 DUE TO THE PRESENCE OF LNAPL.
7. INSTALLATION OF GROUNDWATER MONITORING WELLS MW-25 THROUGH MW-28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14. THESE MONITORING WELLS WERE ADDED TO THE INTERIM GROUNDWATER MONITORING PROGRAM IN 4Q14.
8. GROUNDWATER MONITORING WELL MW-28 WAS SPLIT SAMPLED WITH THE VILLAGE OF ROXANA DURING 4Q14.

Sample Location	MW-28
Sampled 10/21/14	Result (mg/L)
Benzene	0.0081

Sample Location	ROST-4-PZ (C)
Sampled 10/9/14	Result (mg/L)
Benzene	0.039

Sample Location	T-12
Sampled 10/17/14	Result (mg/L)
Benzene	1.83
Ethylbenzene	1.75
Naphthalene	0.184 J
2-Methylnaphthalene	0.0369

Sample Location	MW-22
Sampled 10/10/14	Result (mg/L)
Benzene	1.62
Ethylbenzene	1.88
Naphthalene	0.202
Toluene	2.3
1,3,5-Trimethylbenzene	0.207
2-Methylnaphthalene	0.0339

Sample Location	P-56
Sampled 10/13/14	Result (mg/L)
Benzene	0.107
2-Methylnaphthalene	0.0296

Sample Location	MW-2
Sampled 10/10/14	Result (mg/L)
Benzene	0.0132
1,3,5-Trimethylbenzene	0.0901

Sample Location	P-59
Sampled 10/14/14	Result (mg/L)
Benzene	12
Ethylbenzene	2.33
Naphthalene	0.38 J
Toluene	1.13
1,3,5-Trimethylbenzene	0.26 J
2-Methylnaphthalene	0.0425

Sample Location	P-57
Sampled 10/14/14	Result (mg/L)
Benzene	220 / 255
Ethylbenzene	1.77 J / 3.86
Naphthalene	<10 / 2.05 J
Toluene	0.849 J / 2.65
2-Methylnaphthalene	0.0338 / 0.0345
Phenol	0.271 J / 0.274 J

Sample Location	P93A	P93B	P93D
Sampled 10/15/14, 11/4/14	Result (mg/L)	Result (mg/L)	Result (mg/L)
Benzene	293 / 277	241	36.4 / 19.9
1,2-Dichloropropane			<0.02 / 0.0079
Phenol		0.128	

Sample Location	MW-4
Sampled 10/16/14	Result (mg/L)
Benzene	0.815

Sample Location	MW-7
Sampled 10/16/14	Result (mg/L)
Benzene	1130 / 984
Phenol	0.155 / 0.133

Sample Location	MW-5
Sampled 10/9/14	Result (mg/L)
Benzene	0.028

Sample Location	P-58
Sampled 10/15/14	Result (mg/L)
Benzene	493
Ethylbenzene	0.793
Isopropylbenzene	1.43 J
n-Propylbenzene	0.781 J
1,3,5-Trimethylbenzene	0.453 J
bis(2-Chloroethyl)ether	0.014
2-Methylnaphthalene	0.0674
Phenol	0.145

Sample Location	MW-8
Sampled 10/16/14	Result (mg/L)
Benzene	486
MTBE	1.19
Phenol	0.126

Sample Location	MW-25
Sampled 10/21/14	Result (mg/L)
Benzene	501
Toluene	2.65
Phenol	0.173

Sample Location	P-66
Sampled 10/14/14	Result (mg/L)
Benzene	0.0212

MW-9, MW-10, MW-28, SECOND ST, MW-27, ROST-4-PZ(A), ROST-4-PZ(B), ROST-4-PZ(C), ROST-4-PZ, THIRD ST, ROST-3-MW, ROST-4-PZ(D), ROST-4-PZ(E), ROST-4-PZ(F), MW-11, ROST-4-PZ(G), ROST-5-PZ, ROST-7-PZ, MW-17, MW-24, FOURTH ST, MW-22, MW-18, MW-19, FIFTH ST, MW-16, ROST-21-PZ, MW-12, VILLAGE OF ROXANA, ROST-10-PZ, MW-20, SIXTH ST, MW-1, MW-2, MW-26, SEVENTH ST, MW-21, MW-4, MW-3, MW-25, EIGHTH ST, MW-5, MW-7, MW-8, MW-13, MW-6A, MW-6B, MW-6C, MW-6D, MW-14, P-114, P-54, P-55, P-59, P-56, P-57, P-93A, P-93B, P-93C, P-93D, P-58, P-66, P-74, P-69, P-70, P-73, P-75, T-6, T-24, T-12, P-60-S, P-60-12, P-60-12S, P-68, P-60-13, P-60-13S, A-28, A-33, A-27, HIGHWAY 111 (S. CENTRAL AVE), CHAFFEE ST, NORTH PROPERTY, WOOD RIVER REFINERY, MAIN PROPERTY, WEST PROPERTY, BP, RAND AVENUE, 1986 APPROXIMATE BENZENE RELEASE SITE

Ø 2ØØ
SCALE FEET

N

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY: djd January 2Ø15
DSGN. BY: lr
CHKD. BY: bbb

4Q14
Groundwater Monitoring Well
Analytical Exceedances

FIG. NO. 5

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIGURE 6 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: DEC. 18, 14 @ 10:14 a.m. by: david_deguire

LEGEND

- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER MONITORING WELL LNAPL THICKNESS
- GROUNDWATER PIEZOMETER LOCATION NOT SAMPLED
- GROUNDWATER PIEZOMETER LNAPL THICKNESS
- LNAPL THICKNESS CONTOUR (FEET)
- EXTENT OF EVS MODEL DATA SET
- 50.0 GROUNDWATER CONCENTRATION BENZENE (mg/L)

LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON OCTOBER 1–3, 2014. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.

NOTES:

1. IMAGES GENERATED UTILIZING CTECH ENVIRONMENTAL VISUALIZATION SYSTEM MODELING SOFTWARE. CONCENTRATIONS BETWEEN KNOWN DATA POINTS (E.G. GROUNDWATER MONITORING WELLS) ARE INTERPOLATIONS AND EXTRAPOLATIONS OF THE MEASURED DATA. SOME INTERPRETATION WAS COMPLETED UTILIZING PROFESSIONAL JUDGEMENT AND CONTOUR LINES WERE MODIFIED BY HAND.
2. ALL RESULTS SHOWN IN mg/L.
3. ANALYTICAL REPORTING LIMITS ARE SHOWN FOR SAMPLES WITH NON-DETECT RESULTS (e.g., <0.0005 mg/L).
4. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
   U = RESULTS IS NON-DETECT.
5. NON-DETECT VALUES ARE MODELED AT HALF THE REPORTING LIMIT.
6. MULTIPLE RESULTS (e.g. 1130/984) INDICATE DUPLICATE SAMPLES OR CONFIRMATION SAMPLES.
7. CONTOUR LINES IN AREA OF P-55 ADJUSTED BASED ON AVAILABLE 4Q14 AND HISTORICAL ANALYTICAL DATA FROM WELLS IN THE AREA.
8. INSTALLATION OF GROUNDWATER MONITORING WELLS MW-25 THROUGH MW-28 BEGAN DURING 3Q14 AND WAS COMPLETED DURING 4Q14.

PZ-1(101) PZ-1(85) MW-9 <0.0005 MW-10 <0.0005 SECOND ST MW-28 0.0081 MW-27 0.00033J ROST-4-PZ(C) 0.039 ROST-4-PZ(A) ROST-4-PZ(B) P-55 0.21 P-60-11 THIRD ST ROST-3-MW 0.003 ROST-4-PZ ROST-4-PZ(D) ROST-4-PZ(E) ROST-4-PZ(F) ROST-5-PZ P-60-S P-60 0.08 0.01 0.10 P-68 0.11* A-28 0.10 T-24 0.89 MW-11 <0.0005 ROST-4-PZ(G) P-54 <0.0005 MW-17 FOURTH ST T-12 1.83 P-69 MW-24 <0.0005 ROST-7-PZ MW-22 1.62 0.10 P-70 0.64* A-27 MW-18 VILLAGE OF ROXANA HIGHWAY 111 (S. CENTRAL AVE) 0.005 0.5 0.05 5.0 MW-19 P-59 12 P-74 0.00068 0.10 P-61 0.76* FIFTH ST MW-16 <0.0005 ROST-21-PZ NORTH PROPERTY PZ-2(84) PZ-2(70.5) MW-12 <0.0005 ROST-10-PZ MW-20 P-56 0.107 SIXTH ST CHAFFER ST BP MW-1 <0.0005 MW-2 0.0132 WOOD RIVER REFINERY MW-26 <0.0005 SEVENTH ST T-6 MW-21 MW-3 0.0005 P-57 220/255 MW-4 0.815 0.005 0.05 0.5 5.0 50.0 500.0 P-93A 293/277 P-93B 241 P-93C 0.00075 P-93D 36.4/19.9 EIGHTH ST MW-25 501 MW-7 1130/984 MW-5 0.028 MW-8 486 PUBLIC WORKS YARD P-58 493 1986 APPROXIMATE BENZENE RELEASE SITE RAND AVENUE P-66 0.0212 P-75 MW-13 0.00037J MW-6A <0.0005 MW-6B <0.0005 MW-6C <0.0005 MW-6D <0.0005/<0.0005 MAIN PROPERTY P-114 <0.0005 MW-14 <0.0005 P-116 P-115 WEST PROPERTY

0 200 SCALE FEET N

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

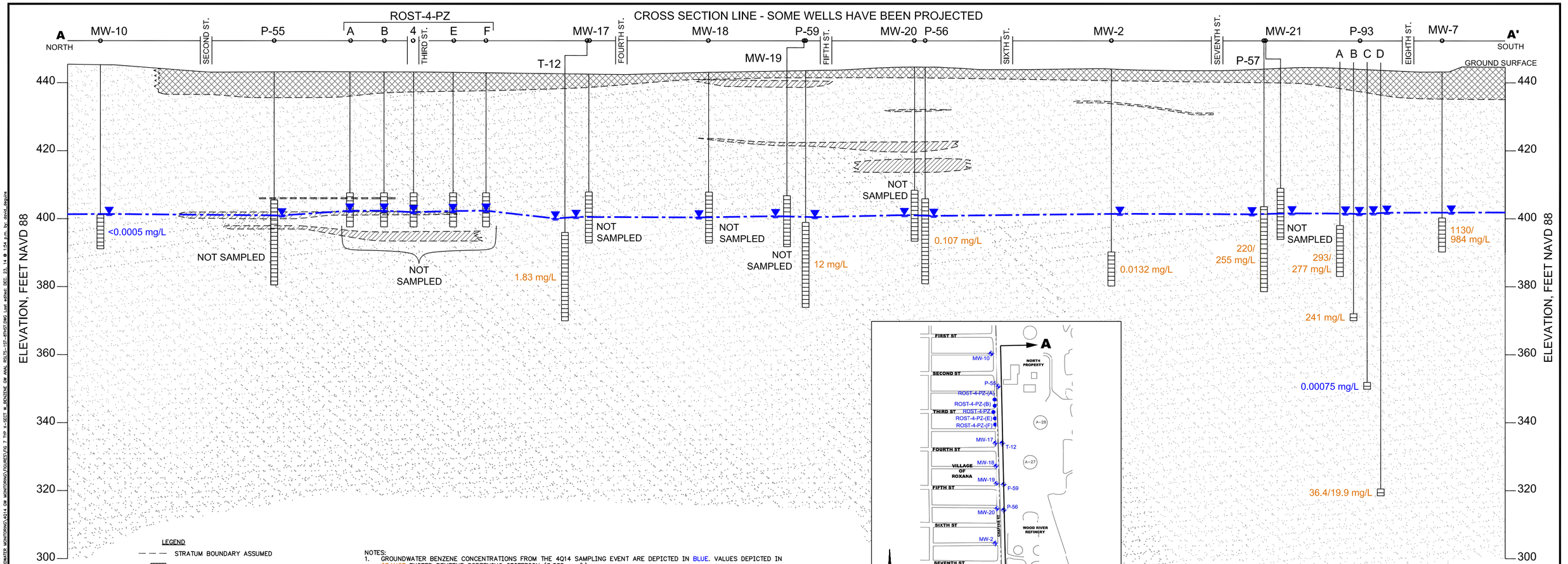
PROJECT NO. 21562973

URS

DRN. BY: djd January 2015
DSGN. BY:nm/lr
CHKD. BY:bbb

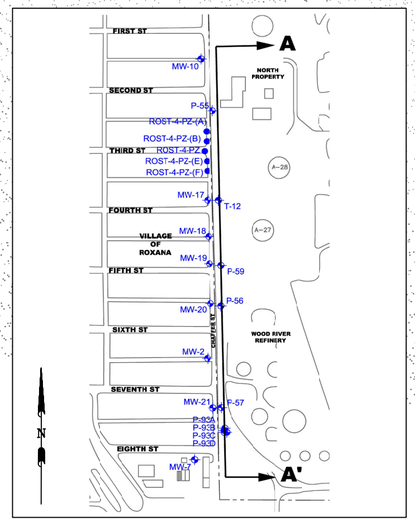
4Q14 Dissolved Phase Benzene Concentrations in Groundwater

FIG. NO. 6



NOTES:

1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 4Q14 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (0.005 mg/L).
2. GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED OCTOBER 1-3, 2014.
3. THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2006 AND 2009 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
4. THE DEPTH AND THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOW/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
5. HISTORIC BORING LOG IS NOT AVAILABLE FOR T-12.



KEYMAP
NOT TO SCALE

VERTICAL SCALE: Ø 2Ø FEET

HORIZONTAL SCALE: Ø 1ØØ FEET

SHELL OIL PRODUCT US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY: djd January 2Ø15
DSGN. BY: lr
CHKD. BY: bbb

Cross-Section of Benzene
4Q14 Groundwater Analytical Results-
Chaffer Street

FIG. NO. 7

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\10_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIG 7 TYP X-SECT W_BENZENE GW ANAL RSLTS-1ST-8THST.DWG Last edited: DEC. 23, 14 @ 1:54 p.m. by: davis.deguire

CROSS SECTION LINE - SOME WELLS HAVE BEEN PROJECTED

WEST B — B' EAST

MW-6D MW-6C MW-6B MW-6A SVE-27 MW-7 P-93A P-93B P-93C P-93D T-6

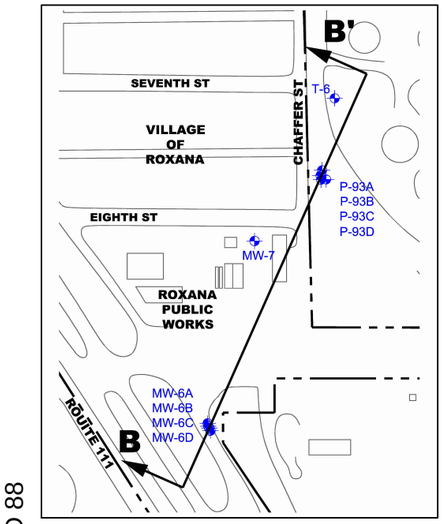
(S. CENTARL AVE) HIGHWAY 111 — EIGHTH ST — SEVENTH ST

GROUND SURFACE

ELEVATION, FEET NAVD 88

440 420 400 380 360 340 320 300

<0.0005 mg/L
<0.0005 mg/L
<0.0005 mg/L
<0.0005/<0.0005 mg/L
1130/ 984 mg/L
293/ 277 mg/L
241 mg/L
0.00075 mg/L
NOT SAMPLED
36.4/19.9 mg/L



KEYMAP
NOT TO SCALE

LEGEND

- STRATUM BOUNDARY ASSUMED
- FILL
- CLAY PROJECTED BETWEEN POINTS (INCLUDES SILTY CLAY AND SANDY CLAY)
- SAND PROJECTED BETWEEN POINTS (INCLUDES SILTY SAND AND CLAYEY SAND)
- SILT
- SHALE
- WELL SCREEN
- WATER LEVEL
- POTENTIOMETRIC SURFACE – ESTIMATED

VERTICAL SCALE Ø 2Ø FEET

HORIZONTAL SCALE Ø 1ØØ FEET

NOTES:
1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 4Q14 SAMPLING EVENT ARE DEPICTED IN BLUE. VALUES DEPICTED IN ORANGE EXCEED BENZENE SCREENING CRITERION (Ø.ØØ5 mg/L).
2. GROUNDWATER ELEVATIONS SHOWN ON THIS CROSS-SECTION ARE BASED ON GROUNDWATER GAUGING DATA COLLECTED OCTOBER 1-3, 2Ø14.
3. THIS CROSS-SECTION IS PRIMARILY BASED ON THE INTERPRETATION OF CPT DATA COLLECTED BY URS DURING THE 2ØØ6 AND 2ØØ9 INVESTIGATION ACTIVITIES. BORING LOGS DEVELOPED DURING OTHER DRILLING TECHNIQUES (E.G. AUGER AND GEOPROBE) WERE USED TO SUPPLEMENT CPT DATA.
4. THE DEPTH AND THICKNESS OF INDIVIDUAL STRATA DEPICTED MAY BE BASED ON CPT LOGS GENERATED AT NEARBY LOCATIONS. THEREFORE, WELL SCREENS MAY APPEAR TO BE PARTIALLY WITHIN CLAY LAYERS OR SHALLOW/DEEPER WITHIN A PERMEABLE STRATUM THAN ACTUAL CONDITIONS DUE TO MAP PROJECTIONS.
5. LITHOLOGICAL INFORMATION FROM SVE-27 WAS OBTAINED FROM BORING LOG TO SUPPLEMENT SITE GEOLOGY ONLY.
6. HISTORIC BORING LOG IS NOT AVAILABLE FOR T-6.

SHELL OIL PRODUCT US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS	PROJECT NO. 21562973
URS	
DRN. BY: djd January 2Ø154 DSGN. BY: lr CHKD. BY: wmp	Cross-Section of Benzene 4Q14 Groundwater Analytical Results- Roxana Public Works Yard
	FIG. NO. 8

File: P:\PROJECTS\ENVIRONMENTAL\SHELL\ROX 2014\1Q_GROUNDWATER MONITORING\4Q14 GW MONITORING\FIGURES\FIG 8 TYP X-SECT W_BENZENE GW ANAL RSLTS-HWY111-CHAFFER.DWG Last edited: DEC. 23, 14 @ 1:57 p.m. by: david_deguire

APPENDIX A

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	VOCs														
				Benzene			2-Butanone			Carbon disulfide			Chloroform			Dichloromethane (Methylene chloride)		
				0.03 [1]			17 [2]			32 [1]			0.3 [1]			0.02 [1]		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	0.0102			< 0.011	U		< 0.0057	U		< 0.0023	U		< 0.0023	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	3.63		J	< 1.4	U		< 0.72	U		0.126	J		0.153	J	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	1.75		J	< 1.3	U		< 0.64	U		0.124	J		0.132	J	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	0.0011			< 0.011	U		< 0.0055	U		< 0.0022	U		< 0.0022	U	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	0.0011			< 0.018	U		0.0012	J		< 0.0035	U		< 0.0035	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	0.0011			< 0.012	U		0.0013	J		< 0.0024	U		< 0.0024	U	
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	0.0128			0.0799			< 0.0054	U		< 0.0021	U		< 0.0021	U	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	0.00072			< 0.013	U		0.00071	J		< 0.0026	U		< 0.0026	U	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	0.00098		J	< 0.012	U	UJ	< 0.0058	U	UJ	< 0.0023	U	UJ	< 0.0023	U	UJ

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	VOCs												VOC TICs		
				Ethylbenzene			Methyl tert-Butyl Ether (MTBE)			Toluene			Xylenes (total)			Butane		
				13 [1]						12 [1]			150 [1]					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	< 0.0023	U		0.00055	J		0.0012	J		< 0.0023	U				
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	< 0.29	U		< 0.29	U		< 0.72	U		< 0.29	U				
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	< 0.25	U		< 0.25	U		< 0.64	U		< 0.25	U				
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	0.00083	J		< 0.0022	U		0.0017	J		0.00033	J		0.052	JN	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	0.0014	J		< 0.0035	U		0.0024	J		0.00065	J				
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	0.0019	J		< 0.0024	U		0.0023	J		0.0005	J				
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	0.001	J		< 0.0021	U		0.0018	J		< 0.0021	U				
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	0.0012	J		< 0.0026	U		0.0012	J		< 0.0026	U		0.021	JN	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	0.0011	J	J	< 0.0023	U	UJ	0.0013	J	J	< 0.0023	U	UJ	0.47	JN	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Cyclohexane			Butane, 2,2-dimethyl-			Butane, 2,3-dimethyl-			Pentane, 2,4-dimethyl-			Cyclopentane, 1,3-dimethyl-		
				280 [2]														
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014															
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014															
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014															
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014															
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014															
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014															
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014															
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014				0.039	JN		0.24	JN		0.14	JN				
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	0.13	JN		0.078	JN		0.72	JN					0.094	JN	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

				VOC TICs													
Location	**Sample ID**	**Depth**	**Sample Date**	**Pentane, 2,3-dimethyl-**			**Isobutane**			**Isopentane**			**Cyclohexane, methyl-**			**Cyclopentane, methyl-**	
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014				0.016	JN		0.014	JN						
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014														
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014														
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014				0.031	JN		0.021	JN						
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014							0.019	JN						
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014														
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014														
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014				0.036	JN		0.43	JN						
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	0.36	JN		0.083	JN		1.4	JN		0.25	JN		0.41	JN

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

				VOC TICs															
Location	**Sample ID**	**Depth**	**Sample Date**	**Pentane, 2-methyl-**			**Pentane, 3-methyl-**			**Pentane**			**Butane, 2,2,3,3-tetramethyl-**			**Hexane, 2,2,3-trimethyl-**		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014							0.0075	JN							
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014															
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014															
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	0.0072	JN					0.012	JN							
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	0.0066	JN					0.011	JN							
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014															
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014															
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014				0.2	JN		0.012	JN		0.089	JN				
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014							0.18	JN					0.48	JN	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	VOC TICs						SVOCs								
				Pentane, 2,2,4-trimethyl-			Pentane, 2,3,3-trimethyl-			Acenaphthylene			Anthracene			Benzo(a)anthracene		
										85 [2]			12000 [1]			0.9 [1]		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014							< 0.0056	U		< 0.0056	U		< 0.0056	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014							< 0.0059	U		< 0.0059	U		< 0.0059	U	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014							< 0.0058	U		< 0.0058	U		< 0.0058	U	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014							< 0.0054	U		< 0.0054	U		< 0.0054	U	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014							< 0.0059	U		< 0.0059	U		< 0.0059	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014							0.0029	J		0.0403			0.0154		
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014							< 0.0063	U		< 0.0063	U		0.0036	J	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014							< 0.006	U		< 0.006	U		< 0.006	U	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	0.3	JN		0.1	JN		< 0.0061	U		< 0.0061	U		< 0.0061	U	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	SVOCs														
				Benzo(a)pyrene			Benzo(b)fluoranthene			Benzo(g,h,i)perylene			Benzo(k)fluoranthene			Chrysene (1,2-Benzphenanthracene)		
				0.09 [1]			0.9 [1]			2300 [2]			9 [1]			88 [1]		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0056	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0059	U	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	< 0.0058	U		< 0.0058	U		< 0.0058	U		< 0.0058	U		< 0.0058	U	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	< 0.0054	U		< 0.0054	U		< 0.0054	U		< 0.0054	U		< 0.0054	U	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0059	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	0.0056	J		0.0035	J		0.0017	J		0.004	J		0.014		
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	< 0.0063	U		0.0113			0.006	J		0.0047	J		0.0038	J	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	< 0.006	U		0.0032	J		0.0032	J		< 0.006	U		< 0.006	U	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.0061	U	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	SVOCs													
				Di-n-butyl phthalate			Fluoranthene			Fluorene			Indeno(1,2,3-cd)pyrene			1-Methylnaphthalene		
				2300 [1]			3100 [1]			560 [1]			0.9 [1]			130 [2]		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	< 0.28	U		< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.011	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	< 0.29	U		< 0.0059	U		< 0.0059	U		< 0.0059	U		0.0022	J	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	< 0.29	U		< 0.0058	U		< 0.0058	U		< 0.0058	U		0.0019	J	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	< 0.27	U		< 0.0054	U		< 0.0054	U		< 0.0054	U		< 0.011	U	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	< 0.29	U		< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.012	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	< 0.3	U		0.028			0.0256			< 0.006	U		0.041	J	
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	< 0.32	U		0.0029	J		< 0.0063	U		0.0047	J		< 0.13	U	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	0.0325	J		0.0025	J		< 0.006	U		0.0017	J		< 0.012	U	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	< 0.31	U		< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.012	U	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	SVOCs													
				2-Methylnaphthalene			p-Chloroaniline			Phenanthrene			Phenol			Pyrene		
				1.9 [2]			0.7 [1]			210 [2]			100 [1]			2300 [1]		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	< 0.011	U		< 0.56	U		< 0.0056	U		< 0.28	U		< 0.0056	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	0.0021	J		< 0.59	U		< 0.0059	U		0.116	J		< 0.0059	U	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	0.0018	J		< 0.58	U		< 0.0058	U		0.0969	J		< 0.0058	U	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	< 0.011	U		< 0.54	U		< 0.0054	U		< 0.27	U		< 0.0054	U	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	0.0011	J		< 0.59	U		< 0.0013	JB	U	< 0.29	U		< 0.0059	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	0.0798	J		0.041	J		0.106			< 0.3	U		0.0377		
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	< 0.13	U		< 0.63	U		< 0.002	JB	U	< 0.32	U		0.0058	J	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	< 0.012	U		< 0.6	U		0.0022	J		< 0.3	U		0.0028	J	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	< 0.012	U		< 0.61	U		< 0.0061	U		< 0.31	U		< 0.0061	U	

SEE LAST PAGE OF TABLE FOR NOTES

SUMMARY OF SOIL ANALYTICAL DETECTIONS
MW-25 THROUGH MW-28

Location	Sample ID	Depth	Sample Date	Hydrocarbons		
				TPH-GRO (VOA)		
				Result (mg/kg)	Lab Quals	URS Quals
MW-25	MW25-082814(36'-38')	36 - 38 ft	8/28/2014	< 13	U	
MW-25	MW25-082814(44'-46')	44 - 46 ft	8/28/2014	3.55	J	
MW-25	MW25-082814(44'-46')-DUP	44 - 46 ft	8/28/2014	4.7	J	
MW-26	MW26-082714 (38-40')	38 - 40 ft	8/27/2014	5.09	J	
MW-26	MW26-082714 (46-48')	46 - 48 ft	8/27/2014	< 34	U	
MW-27	MW-27-101614 (40-42)	40 - 42 ft	10/16/2014	< 16	U	
MW-27	MW-27-101614 (48-50)	48 - 50 ft	10/16/2014	5.31	J	
MW-28	MW28-090214 (32-34')	32 - 34 ft	9/2/2014	2.86	J	
MW-28	MW28-090214 (36-40')	36 - 40 ft	9/2/2014	7.7	J	

Laboratory Qualifiers
< "U" = Not detected at the reporting limit.
J = The analyte was detected below the reporting limit. Result is estimated.
JN = Estimated value for tentatively identified compound (TICs). (library search)
B = Analyte is detected in the method blank.

Note: Library searches for TICs are used to look for the presence of non-target analytes.
TICs reported are those present at levels above ten percent of associated internal standard responses.

URS Qualifiers
J = The result is estimated.
UJ = The result is estimated non-detect.
= Exceedance of residential soil screening criteria, see Notes for criteria source

Notes
1 Denotes screening critieria source from 35 I.A.C. 742 (TACO), Appendix B, Table A.
2 Denotes screening criteria source from IL EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables).

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-25

Starting Date: 8/26/14
Completion Date: 8/29/14
Casing Elevation: 438.35
Ground Elevation: 438.86

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):792086.69
E: (Y):2321991.75

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							FILL	Asphalt (FILL)	Air knifed to 10' bgs to clear for utilities and obstructions.
				20.0			ML	Loose, moist, brown, very fine, Clayey SILT (ML)	
							SP	Loose, dry, brown, fine grained SAND (SP)	
5				14.8			ML	Loose, wet, brown, very fine, Clayey SILT (ML)	
				2.5			SP	Loose, dry, brown, fine grained SAND (SP), with clay	
				68.2				Grades to fine sand	
10		24	18	3.4					
		24	19	4.0				Grades to fine to medium grained sand	
15		24	16	4.9					
		24	18	4.8					
		24	18	5.0					
20		24	20	4.7					
		24	20	12.1					

Completion Depth: **47.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 38 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.
▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-25

Starting Date: 8/26/14
Completion Date: 8/29/14
Casing Elevation: 438.35
Ground Elevation: 438.86

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):792086.69
E: (Y):2321991.75

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
		24	16	6.7				Same: Loose, dry, brown, fine to medium grained SAND (SP)	
		24	19	12.5				Becomes gray	
		24	20	12.7				Becomes light brown	
30		24	18	13.0					
		24	20	9.5					
35		24	19	7.3					
		24	18	51			SP	Grades to medium to coarse grained	
		24	14	890				Becomes wet, coarse grained ▽	
40		24	6	308				Becomes gray	
		24	12	111					
45		24	24	2985					
								Bottom of boring at 47' bgs	

Completion Depth: **47.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 38 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.

▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

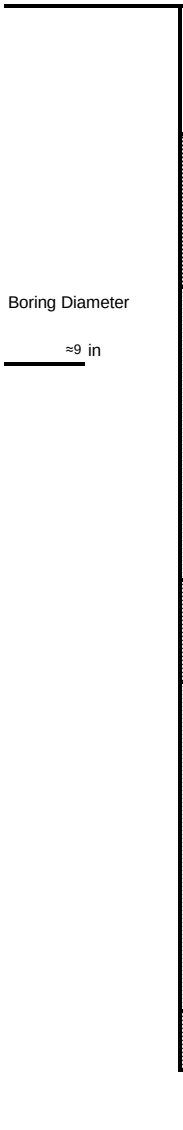
USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

Monitoring Well Installation Details
Flush Mount Monitoring Well Construction Diagram

URS Corporation

Project:	Roxana Monitoring Well Drilling & Installation / 21562973.15000			Well ID:	MW-25
Project Location:	Roxana, Illinois	Date Started:	8/26/2014		
Well Location:	On East 8th Street	Date Completed:	8/29/2014	Boring ID:	MW-25
Drilling Contractor:	Roberts Environmental Drilling, Inc.	Time Seal Set:	17:00 / 8-28-14	Northing:	792086.69
Driller:	J. Crank	Type of Rig:	CME-75	Easting:	2321991.75
Consulting Firm:	URS Corporation	Drilling Method:	H S A (4.25" ID)	Elevation Datum:	NAVD 88
Geologist:	E. Arthur	Owner:	Equilon Enterprises LLC d/b/a Shell Oil Products US	Township: Range: Section:	T5N R9W Section 34



	Depths (ft bgs)	Elevations (ft)
Ground Elevation:		438.86
Depth of Riser Below Ground:	0.51	
Elevation of Top of Riser Pipe:	0.51	438.35
ID/Type of Surface Casing:	8" Flush Mount	
Type of Surface Seal:	Concrete	
Bottom of Surface Seal:	2.00	436.86
Groundwater (after completion):	37.51	401.35
Type of Riser Pipe:	Schedule 40 PVC	
Riser Diameter:	2.00 in	
Type of Backfill:	Cement/Bentonite Grout	
Top of Seal:	32.10	406.76
Type of Seal:	Bentonite Chips	
Top of Filter Pack	34.10	404.76
Top of Screen	36.10	402.76
Type of Filter Pack:	ANSI / NSF Quartz Sand	
Type of Screen:	Schedule 40 PVC	
Screen Diameter	2.00 in	
Screen Slot Size:	0.010 in	
Bottom of Screen:	46.10	392.76
Bottom of Blank Casing:	46.35	392.51
Backfill/Seal Below Well:	46.35	392.51
Type of Backfill/Seal Below Well:	Native soil (cave in) and placed ANSI / NSF Quartz Sand	
Bottom of Boring:	47	391.86

DIAGRAM IS NOT TO SCALE

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-26

Starting Date: 8/25/14
Completion Date: 8/28/14
Casing Elevation: 441.02
Ground Elevation: 441.29

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):792393.52
E: (Y):2322012.55

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							FILL	Asphalt (FILL)	Air knifed to 10' bgs to clear for utilities and obstructions.
				2.0			CL	Soft, dry, reddish brown, low plastic, Silty Sandy CLAY CL)	
5				6.5				Loose, dry, brown, fine grained SAND (SP), trace clay	
				6.9				Clay grades out	
				6.3					
10		24	14	1.3					
		24	14	1.3					
15		24	16	2.0			SP	Grades to fine to medium grained	
		24	17	2.0					
		24	20	3.6					
20		24	20	4.3					
		24	12	4.9					

Completion Depth: **49.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 40.5 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.

▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-26

Starting Date: 8/25/14
Completion Date: 8/28/14
Casing Elevation: 441.02
Ground Elevation: 441.29

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):792393.52
E: (Y):2322012.55

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
		24	18	6.4				Same: Loose, dry, brown, fine to medium grained SAND (SP)	
		24	18	5.3					
		24	19	5.9					
30		24	20	2.9				Becomes gray	
		24	18	5.2				Grades to medium grained Becomes orange brown	
								Becomes gray	
35		24	20	5.0				Becomes fine grained, with silt	
		24	18	8.5			SP	Becomes light brown, medium grained	
		24	13	25.0				Becomes moist, brown	
40		24	18	3.0				Becomes wet ▽	
		24	23	2.3					
45		24	23	2.0					
		24	10	3.0					
								Bottom of boring at 49' bgs	

Completion Depth: **49.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 40.5 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.

▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected

URS

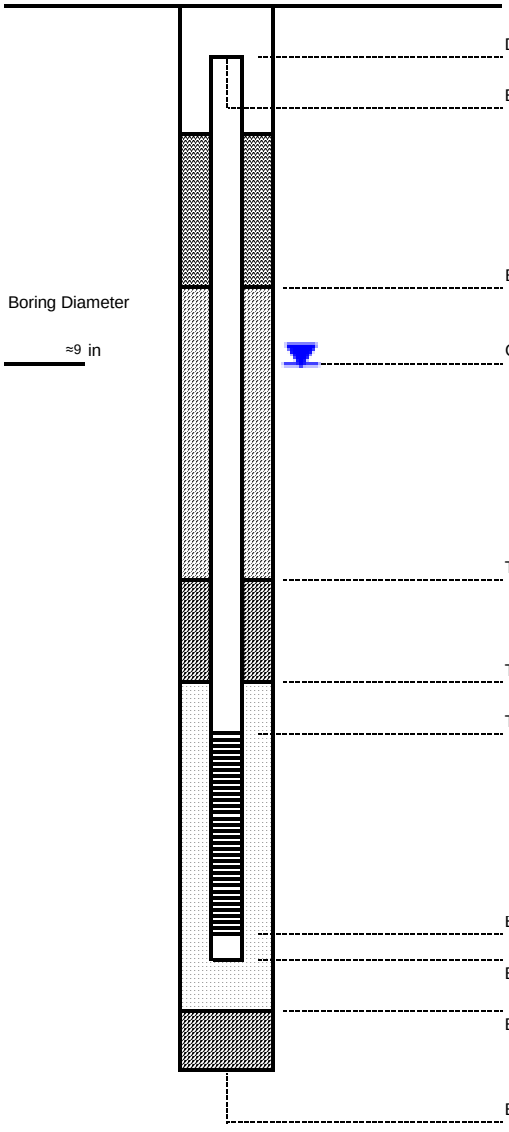
USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

Monitoring Well Installation Details
Flush Mount Monitoring Well Construction Diagram

URS Corporation

Project:	Roxana Monitoring Well Drilling & Installation / 21562973.15000			Well ID:	MW-26
Project Location:	Roxana, Illinois	Date Started:	8/25/2014		
Well Location:	On East 7th Street	Date Completed:	8/28/2014	Boring ID:	MW-26
Drilling Contractor:	Roberts Environmental Drilling, Inc.	Time Seal Set:	13:30 / 8-27-14	Northing:	792393.52
Driller:	J. Crank	Type of Rig:	CME-75	Easting:	2322012.55
Consulting Firm:	URS Corporation	Drilling Method:	H S A (4.25" ID)	Elevation Datum:	NAVD 88
Geologist:	E. Arthur	Owner:	Equilon Enterprises LLC d/b/a Shell Oil Products US	Township: Range: Section:	T5N R9W Section 34



	Depths (ft bgs)	Elevations (ft)
Ground Elevation:		441.29
Depth of Riser Below Ground:	0.27	
Elevation of Top of Riser Pipe:	0.27	441.02
ID/Type of Surface Casing:	8" Flush Mount	
Type of Surface Seal:	Concrete	
Bottom of Surface Seal:	2.00	439.29
Groundwater (after completion):	40.18	401.11
Type of Riser Pipe:	Schedule 40 PVC	
Riser Diameter:	2.00 in	
Type of Backfill:	Cement/Bentonite Grout	
Top of Seal:	34.42	406.87
Type of Seal:	Bentonite Chips	
Top of Filter Pack	36.42	404.87
Top of Screen	38.42	402.87
Type of Filter Pack:	ANSI / NSF Quartz Sand	
Type of Screen:	Schedule 40 PVC	
Screen Diameter	2.00 in	
Screen Slot Size:	0.010 in	
Bottom of Screen:	48.42	392.87
Bottom of Blank Casing:	48.67	392.62
Backfill/Seal Below Well:	48.67	392.62
Type of Backfill/Seal Below Well:	Native soil (cave in) and placed ANSI / NSF Quartz Sand	
Bottom of Boring:	49.00	392.29

DIAGRAM IS NOT TO SCALE

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-27

Starting Date: 10/15/14
Completion Date: 10/17/14
Casing Elevation: 443.40
Ground Elevation: 443.70

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):793753.22
E: (Y):2322016.01

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							FILL	Asphalt/crushed limestone (FILL)	Air knifed to 10' bgs to clear for utilities and obstructions.
				0.3			CL	Soft, moist, brown, Silty CLAY (CL)	10" diameter surface casing set to 10' bgs due to the proximity of the boring to an underground natural gas line.
				1.4					
5				2.2				Increasing silt	
				0.7			ML	Soft, moist, brown, Clayey SILT (ML), with sand	
				0.5			SC	Loose, moist, brown, Clayey SAND (SC)	
10		24	22	3.5			SM	Loose, moist, brown, Silty SAND (SM)	
		24	17	4.4			SP	Loose, moist, brown to dark brown banded, fine grained SAND (SP), trace silt	
15		24	21	5.1					
		24	21	3.1				Becomes fine to medium grained	
		24	18	3.0					
20							SM	Loose, wet, dark brown, fine grained, Silty SAND (SM)	
		24	22	3.7			SP	Medium dense, dry, light brown, fine to medium grained SAND (SP), trace silt	
		24	24	4.7					

Completion Depth: **51.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **P. Seymour**
Drilling Method: **HSA**
Drill Rig Type: **DT-8040**
Logged by: **E. Fritsch/M. Miller**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 42 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.
▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-27

Starting Date: 10/15/14
Completion Date: 10/17/14
Casing Elevation: 443.40
Ground Elevation: 443.70

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):793753.22
E: (Y):2322016.01

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
		24	24	5.3				Same: Medium dense, dry, light brown, fine to medium grained SAND (SP), trace silt	
		24	24	4.1					
		24	24	3.7			SP		
30		24	22	3.5					
		24	22	3.0			CL	Soft, moist, brown, low plastic, Silty CLAY (CL)	
							SM	Medium dense, moist, brown, fine grained, Silty SAND (SM)	
		24	24	2.3				Medium dense, dry, tan to brown, fine grained SAND (SP), with silt	
35		24	21	3.6			SP		
		24	21	2.1				Becomes very moist, gray brown With clay	
40							SC	Medium dense, wet, brownish gray, clayey SAND (SC)	
		24	21	8.3				Medium dense, moist to dry, gray to dark gray, fine to medium grained SAND (SP) ▽	
		24	21	3.0			SP	Becomes wet 2" silty clay seam	
45		24	23	1.8					
		24	24	14.2			CL	Stiff, moist, dark gray, Silty CLAY (CL)	
							ML	Medium dense, moist, dark gray, Clayey SILT (ML)	
		24	24	16.6			SM	Soft, wet, dark gray, Silty SAND (SM)	

Completion Depth: **51.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **P. Seymour**
Drilling Method: **HSA**
Drill Rig Type: **DT-8040**
Logged by: **E. Fritsch/M. Miller**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 42 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.
▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-27

Starting Date: 10/15/14
Completion Date: 10/17/14
Casing Elevation: 443.40
Ground Elevation: 443.70

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):793753.22
E: (Y):2322016.01

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							SM	Same: Soft, wet, dark gray, Silty SAND (SM)	
								Bottom of boring at 51' bgs	
55									
60									
65									
70									

Completion Depth: **51.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **P. Seymour**
Drilling Method: **HSA**
Drill Rig Type: **DT-8040**
Logged by: **E. Fritsch/M. Miller**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 42 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.

▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

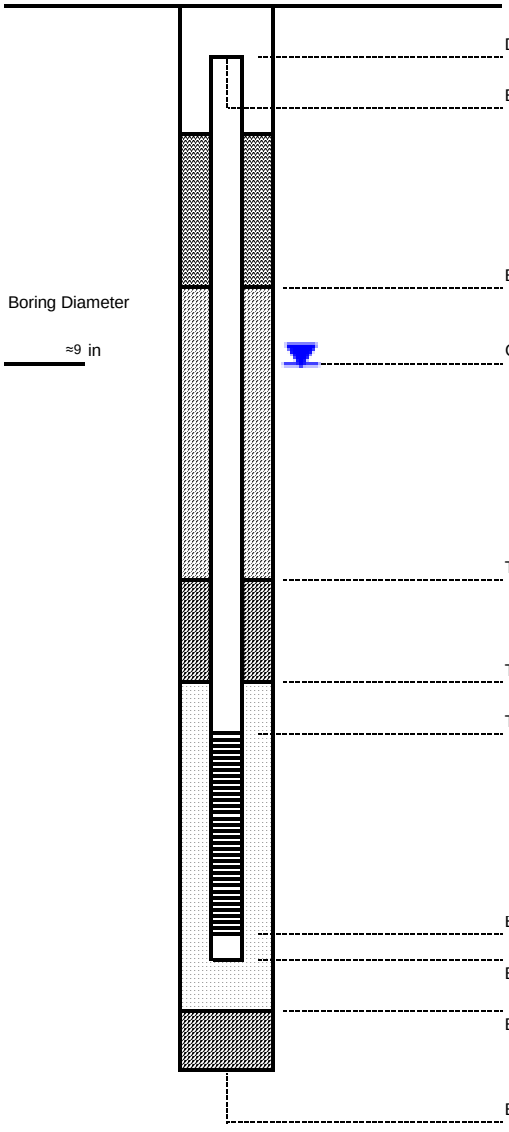
USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

Monitoring Well Installation Details
Flush Mount Monitoring Well Construction Diagram

URS Corporation

Project:	Roxana Monitoring Well Drilling & Installation / 21562973.15000			Well ID:	MW-27
Project Location:	Roxana, Illinois	Date Started:	10/15/2014		
Well Location:	Alley between East 2nd and East 3rd Streets	Date Completed:	10/17/2014	Boring ID:	MW-27
Drilling Contractor:	Roberts Environmental Drilling, Inc.	Time Seal Set:	16:30 / 10-16-14	Northing:	793753.22
Driller:	P. Seymour	Type of Rig:	Geoprobe DT8040	Easting:	2322016.01
Consulting Firm:	URS Corporation	Drilling Method:	H S A (4.25" ID)	Elevation Datum:	NAVD 88
Geologist:	E. Fritsch M. Miller	Owner:	Equilon Enterprises LLC d/b/a Shell Oil Products US	Township: Range: Section:	T5N R9W Section 34



	Depths (ft bgs)	Elevations (ft)
Ground Elevation:		443.70
Depth of Riser Below Ground:	0.30	
Elevation of Top of Riser Pipe:	0.30	443.40
ID/Type of Surface Casing:	12" Flush Mount	
Type of Surface Seal:	Concrete	
Bottom of Surface Seal:	2.00	441.70
Groundwater (after completion):	41.90	401.80
Type of Riser Pipe:	Schedule 40 PVC	
Riser Diameter:	2.00 in	
Type of Backfill:	Cement/Bentonite Grout	
Top of Seal:	33.09	410.61
Type of Seal:	Bentonite Chips	
Top of Filter Pack	38.09	405.61
Top of Screen	40.09	403.61
Type of Filter Pack:	ANSI / NSF Quartz Sand	
Type of Screen:	Schedule 40 PVC	
Screen Diameter	2.00 in	
Screen Slot Size:	0.010 in	
Bottom of Screen:	50.09	393.61
Bottom of Blank Casing:	50.34	393.36
Backfill/Seal Below Well:	50.34	393.36
Type of Backfill/Seal Below Well:	Native soil (cave in) and placed ANSI / NSF Quartz Sand	
Bottom of Boring:	51.00	392.70

DIAGRAM IS NOT TO SCALE

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-28

Starting Date: 8/25/14
Completion Date: 9/3/14
Casing Elevation: 443.34
Ground Elevation: 443.78

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):793894.54
E: (Y):2322110.57

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							FILL	Asphalt (FILL)	Air knifed to 10' bgs to clear for utilities and obstructions.
				0.5			ML	Loose, dry, brown, very fine grained, Clayey SILT (ML)	
5				0.6			SM	Loose, dry, brown, fine grained, Silty SAND (SM)	
								Grades to fine grained	
				0.5			SP	Loose, dry, brown, fine grained SAND (SP), with clay	
				0.5					
10		24	14	1.9			ML	Loose, moist, brown, very fine grained, Sandy SILT (ML)	
		24	20	4.9			SP	Loose, dry, brown, fine grained SAND (SP)	
15		24	18	5.3					
		24	18	6.1					
		24	18	6.1					
20		24	19	6.8				Grades to fine to medium grained	
		24	20	7.0					
								Grades to fine grained	

Completion Depth: **46.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 37.4 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.

▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected

URS

USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

LOG OF BORING AND WELL CONSTRUCTION DETAIL

MW-28

Starting Date: 8/25/14
Completion Date: 9/3/14
Casing Elevation: 443.34
Ground Elevation: 443.78

Quadrangle
Sec:34
T:5N
R:9W
UTM (or State Plane) Coord
N: (X):793894.54
E: (Y):2322110.57

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID/FID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
		24	22	7.6				Same: Loose, dry, brown, fine grained SAND (SP)	
		24	20	8.2			SP		
		24	15	8.6					
30		24	16	8.0				Becomes with silt	
							ML	Loose, dry, brown, very fine grained, Sandy SILT (ML)	
		24	18	82			CL	Soft, moist, gray, low plastic CLAY (CL)	
							ML	Loose, moist, gray, very fine, Clayey SILT (ML) Clay grades out Become dry	
35		24	18	13.2				Grades to sandy silt	
							SP	Loose, dry, gray, fine grained SAND (SP)	
							CL	Soft, moist, gray, low plastic CLAY (CL)	
		24	19	49.9			SP	Loose, dry, gray, fine grained SAND (SP), with silt ▽	
							ML	Loose, wet, gray, very fine SILT (ML)	
							CL	Soft, wet, gray, low plastic, Silty CLAY (CL)	
							ML	Loose, wet, gray, very fine SILT (ML)	
		24	18	81.2			CL	Soft, moist, gray, low plastic, Silty CLAY (CL)	
							ML	Loose, dry, gray, very fine SILT (ML)	
40							CL	Soft, moist, gray, low plastic, Silty CLAY (CL)	
		24	19	3.4			ML	Loose, wet, gray, very fine SILT (ML)	
								Soft, moist, brown, medium to coarse grained SAND (SP)	
		24	18	39.2			SP	Becomes wet Become gray	
		24	20	21.8			CL	Soft, moist, gray, low plastic CLAY (CL)	
45							ML	Loose, wet, gray, very fine SILT (ML)	
								Bottom of boring at 46' bgs	

Completion Depth: **46.0 Ft bgs**
Project No.: **21562973**
Project Name: **Additional Characterization**
Drilling Contractor: **Roberts Environmental Drilling Inc.**
Driller Name: **J. Crank**
Drilling Method: **HSA**
Drill Rig Type: **CME 75**
Logged by: **E. Arthur**
County: **Madison**
Site ID No.: **1191150002**
Federal ID No.: **ILD 080 012 305**

Water Depth: 37.4 ft., After ATD hrs.
Water Depth: _____ ft., After _____ hrs.
▽ Water level at time of drilling
▼ Water level after drilling
ATD - At time of drilling
NE - None Encountered
NA - Not Applicable

Geoprobe
Air Knife/Hand Auger Sampler
Air Rotary
Sonic
Splitspoon Sampler
Hollow Stem Auger-Soil samples not collected

URS

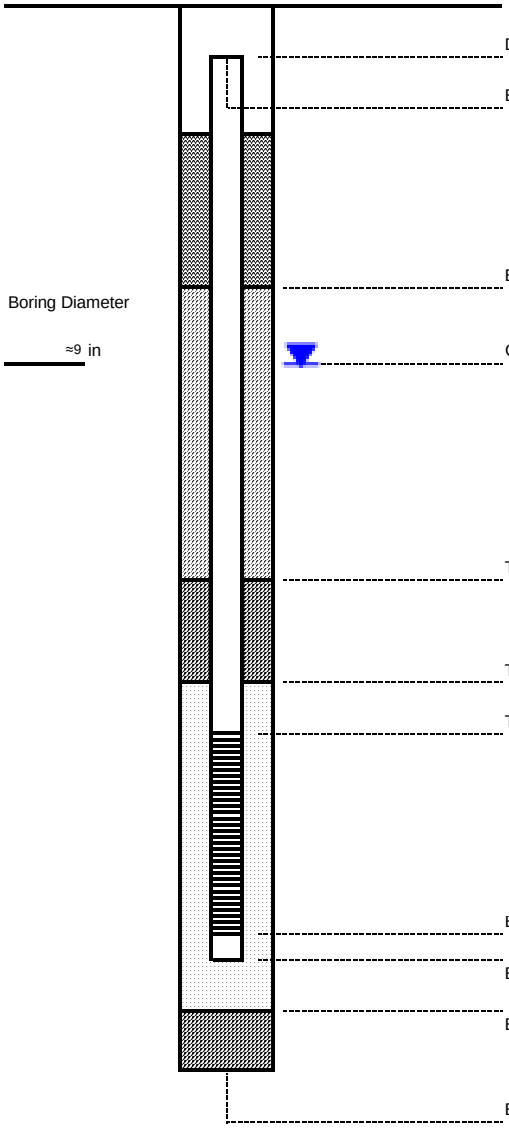
USC based on field visual observations

URS (EVIRON) LOG (EPA FORMAT) +1 WELL P:\RESOURCES\GINTDATA\GINT\PROJECTS\ROXANA (MW-25 THRU 28) ADDITIONAL CHARACTERIZATION 2014.GPJ P:\RESOURCES\GINTDATA\GINT\ENVIRONMENTAL\URSSTLEV.GLB 11/6/14

Monitoring Well Installation Details
Flush Mount Monitoring Well Construction Diagram

URS Corporation

Project:	Roxana Monitoring Well Drilling & Installation / 21562973.15000			Well ID:	MW-28
Project Location:	Roxana, Illinois	Date Started:	8/25/2014		
Well Location:	East 2nd Street	Date Completed:	9/3/2014	Boring ID:	MW-28
Drilling Contractor:	Roberts Environmental Drilling, Inc.	Time Seal Set:	16:00 / 9-2-14	Northing:	793894.54
Driller:	J. Crank	Type of Rig:	CME-75	Easting:	2322110.57
Consulting Firm:	URS Corporation	Drilling Method:	H S A (4.25" ID)	Elevation Datum:	NAVD 88
Geologist:	E. Arthur	Owner:	Equilon Enterprises LLC d/b/a Shell Oil Products US	Township: Range: Section:	T5N R9W Section 34



	Depths (ft bgs)	Elevations (ft)
Ground Elevation:		443.78
Depth of Riser Below Ground:	0.44	
Elevation of Top of Riser Pipe:	0.44	443.34
ID/Type of Surface Casing:	8" Flush Mount	
Type of Surface Seal:	Concrete	
Bottom of Surface Seal:	2.00	441.78
Groundwater (after completion):	41.45	402.33
Type of Riser Pipe:	Schedule 40 PVC	
Riser Diameter:	2.00 in	
Type of Backfill:	Cement/Bentonite Grout	
Top of Seal:	30.05	413.73
Type of Seal:	Bentonite Chips	
Top of Filter Pack	32.05	411.73
Top of Screen	34.05	409.73
Type of Filter Pack:	ANSI / NSF Quartz Sand	
Type of Screen:	Schedule 40 PVC	
Screen Diameter	2.00 in	
Screen Slot Size:	0.010 in	
Bottom of Screen:	44.05	399.73
Bottom of Blank Casing:	44.30	399.48
Backfill/Seal Below Well:	44.30	399.48
Type of Backfill/Seal Below Well:	Native soil (cave in) and placed ANSI / NSF Quartz Sand	
Bottom of Boring:	46.00	397.78

DIAGRAM IS NOT TO SCALE

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: Melissa Mansker, Stefanie Voss

DATE: 10-6-14 WEATHER: Partly cloudy, breezy, Temp 60's F

MONITORING WELL ID: MW-1 SAMPLE ID: MW-1-ROX-100614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.13 ft
Depth to Water (btoc): 41.10 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 48.80 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.03 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 54.13 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.2 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1007	41.10	clear	—	6.77	1173	-45	0.12	63.70	19.02
880	1010	41.10	clear	—	6.77	1171	-45	0.10	60.94	19.02
1760	1012	41.10	clear	—	6.77	1171	-45	0.09	63.73	19.05
2640	1014	41.10	clear	—	6.77	1174	-44	0.08	68.86	19.05
3520	1016	41.10	clear	—	6.77	1174	-43	0.08	72.20	19.25
4400	1019	41.10	clear	—	6.77	1173	-42	0.06	10.43	19.22
5280	1021	41.10	clear	—	6.77	1172	-42	0.04	71.32	19.09
6160	1023	41.10	clear	—	6.77	1171	-41	0.05	12.88	19.04
7040	1026	41.10	clear	—	6.77	1172	-40	0.04	12.67	19.04
7920	1028	41.10	clear	—	6.77	1170	-39	0.03	49.01	19.06
8800	1030	41.10	clear	—	6.77	1171	-38	0.02	21.12	18.98
9680	1033	41.10	clear	—	6.77	1171	-38	0.02	23.43	18.94
10560	1035	41.10	clear	—	6.77	1171	-37	0.01	21.21	18.95
11440	1037	41.10	clear	—	6.77	1170	-37	0.01	27.42	18.95
12320	1040	41.10	clear	—	6.77	1171	-36	0.03	22.58	18.96
13200	1042	41.10	clear	—	6.77	1171	-36	0.00	55.03	18.94

Start Time: 1007 Elapsed Time (min): 40 Water Quality Meter ID & SN: TROLL 9500 - R252206

Stop Time: 1047 Average Purge Rate (mL/min): 400 Date Calibrated: 10-6-14

SAMPLING DATA

Sample Date: 10-6-14 Sample Time: 1050 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: MS/MSD

VOA Vials, No Headspace ☑ Initials:

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 15000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14

PROJECT NUMBER: 21562973.0004 FIELD PERSONNEL: M. Manske / S. Voss

DATE: 10-6-14

MONITORING WELL ID: MW-1

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
14080	1044	41.10	clear	—	6.77	1170	-36	0.00	66.28	18.91
14960	1047	41.10	clear	—	6.77	1170	-36	0.02	8.095	18.93

M. Manske 10-6-14

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske, S. Voss

DATE: 10-10-14 WEATHER: Rain, 50°

MONITORING WELL ID: MW-2 SAMPLE ID: MW2-ROX-101014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 60.20 ft
Depth to Water (btoc): 42.49 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 49.87 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 17.33 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 55.20 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 946* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2837 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 177.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
			uS/cm				

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0858	42.50	clear	strong hydrocarbon	6.66	1499	-106	0.36	15.69	19.40
880	0900	42.50	clear		6.67	1498	-111	0.07	16.42	19.86
1760	0903	42.50	clear		6.67	1485	-113	0.01	16.18	20.00
2640	0905	42.50	clear		6.67	1469	-114	-0.01	24.50	20.09
3520	0907	42.50	clear		6.67	1450	-114	-0.03	13.63	20.12
4400	0909	42.50	clear		6.67	1440	-114	-0.04	13.26	20.13
5280	0912	42.50	clear		6.67	1437	-114	-0.05	11.44	20.19
6160	0914	42.50	clear		6.67	1436	-115	-0.05	12.09	20.21
7040	0917	42.50	clear		6.67	1435	-116	-0.06	13.21	20.20
7920	0919	42.50	clear		6.67	1438	-116	-0.05	5.952	20.16

M. Manske 10-10-14

Start Time: 0858 Elapsed Time (min): 21 Water Quality Meter ID & SN: TROLL 9500 -- R25206
Stop Time: 0919 Average Purge Rate (mL/min): 400 Date Calibrated: 10-10-14

SAMPLING DATA

Sample Date: 0858 Sample Time: 0925 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —
VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7920 mL

1.58

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manslen, S. Voss

DATE: 10-9-14 WEATHER: Rainy, overcast 50°

MONITORING WELL ID: MW-3 SAMPLE ID: MW3-ROX-100914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.00 ft
Depth to Water (btoc): 28.18 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.67 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.82 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 851* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0940	28.18	clear	hydrocarbon	6.89	1337	-136	0.07	55.06	18.66
800	0942	28.18	clear	hydrocarbon	6.90	1340	-139	0.03	58.61	18.77
1600	0944	28.18	clear	hydrocarbon	6.91	1344	-141	0.00	76.69	18.85
2400	0947	28.18	clear	hydrocarbon	6.91	1349	-141	-0.01	10.91	18.90
3200	0949	28.18	clear	hydrocarbon	6.92	1352	-142	-0.02	3.871	18.95

M. Manslen 10/9/14

Start Time: 0940 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 0949 Average Purge Rate (mL/min): 400 Date Calibrated: 10-9-14

SAMPLING DATA

Sample Date: 10-9-14 Sample Time: 0955 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: EB

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 3200 mL

2.08

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mauskar, S. Voss

DATE: 10-16-14 WEATHER: Cool, breezy, sunny 50°

MONITORING WELL ID: MW-4 SAMPLE ID: MW4-ROX-101614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.39 ft
Depth to Water (btoc): 39.49 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 46.06 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.9 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.39 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 918* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2753 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 99.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0853	39.49	cloudy	strong hydrocarbon	6.79	1330	-98	016	68.63	18.59
800	0856	39.49	cloudy		6.81	1331	-107	0.04	83.66	18.78
1600	0858	39.49	cloudy		6.83	1329	-111	0.01	69.68	18.87
2400	0900	39.49	cloudy		6.84	1326	-114	-0.02	49.93	18.91
3200	0903	39.49	cloudy		6.85	1323	-116	-0.03	31.17	18.95
4000	0905	39.49	cloudy		6.85	1321	-118	-0.04	19.15	18.96
4800	0907	39.49	clear		6.86	1318	-119	-0.04	12.77	18.96
5600	0909	39.49	clear		6.86	1315	-120	-0.04	9.221	18.96

M. Mauskar 10-16-14

Start Time: 0853 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 0909 Average Purge Rate (mL/min): 400 Date Calibrated: 10-16-14

SAMPLING DATA

Sample Date: 10-16-14 Sample Time: 0915 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 5600 mL

1.57

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manska, S. Voss

DATE: 10-9-14 WEATHER: Cool, cloudy 55°

MONITORING WELL ID: MW-5 SAMPLE ID: MW5-ROX-100914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.30 ft
Depth to Water (btoc): 27.75 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.97 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.55 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 39.30 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = – ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = – ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: – ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1429	27.75	clear	hydrocarbon	6.84	1215	-116	0.54	28.41	19.03
800	1431	27.75	clear		6.83	1211	-119	0.20	35.92	19.04
1600	1433	27.75	clear		6.83	1208	-121	0.11	35.10	19.04
2400	1435	27.75	clear		6.83	1209	-122	0.08	26.88	19.05
3200	1437	27.75	clear		6.83	1211	-123	0.07	28.47	19.06
4000	1439	27.75	clear		6.83	1211	-123	0.05	36.99	19.08
4800	1441	27.75	clear		6.83	1210	-124	0.03	22.50	19.08
5600	1443	27.75	clear		6.83	1210	-124	0.01	19.09	19.07
6400	1445	27.75	clear		6.83	1209	-125	-0.01	17.77	19.08
7200	1448	27.75	clear		6.83	1209	-125	-0.02	18.04	19.07

Start Time: 1429 Elapsed Time (min): 19 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1448 Average Purge Rate (mL/min): 400 Date Calibrated: 10-9-14

SAMPLING DATA

Sample Date: 10-9-14 Sample Time: 1450 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: MS/MSD

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7200 mL

28

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mankus, L. Voss

DATE: 10-8-14 WEATHER: Sunny, warm 70°

MONITORING WELL ID: MW-6A SAMPLE ID: MW6A-ROX-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.16 ft
Depth to Water (btoc): 29.84 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.83 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.32 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 40.16 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 856* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2569 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1226	29.84	slightly cloudy	—	6.69	1587	-114	0.75	49.62	19.79
800	1228	29.84	clear	—	6.68	1596	-116	0.35	57.02	19.48
1600	1230	29.84	clear	—	6.68	1590	-117	0.22	64.16	19.37
2400	1232	29.84	clear	—	6.68	1588	-118	0.15	62.29	19.35
3200	1235	29.84	clear	—	6.68	1588	-119	0.06	50.80	19.38
4000	1237	29.84	clear	—	6.68	1593	-120	0.04	42.44	19.31
4800	1239	29.84	clear	—	6.69	1597	-122	0.05	33.50	19.29
5600	1241	29.84	clear	—	6.70	1600	-123	0.05	27.56	19.28
6400	1243	29.84	clear	—	6.70	1600	-123	0.02	22.81	19.36
7200	1246	29.84	clear	—	6.70	1598	-123	0.02	23.63	19.26
8000	1248	29.84	clear	—	6.70	1597	-123	0.01	25.46	19.20
8800	1250	29.84	clear	—	6.69	1594	-123	0.02	24.72	19.14

Melissa Mankus 10/8/14

Start Time: 1226 Elapsed Time (min): 24 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1250 Average Purge Rate (mL/min): 400 Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 Sample Time: 1255 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: EB

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 8800 mL

2.22

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mawdsley, S. Voss

DATE: 10-8-14 WEATHER: Sunny, warm 65°

MONITORING WELL ID: MW-6B SAMPLE ID: MW6B-ROX-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 69.38 ft
Depth to Water (btoc): 29.87 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 64.05 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): 39.51 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 66.88 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1001* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3004 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1122	29.88	light/cloudy	—	6.95	1181	-88	0.61	76.91	18.79
940	1125	29.88	cloudy	—	6.94	1194	-90	0.35	45.16	18.69
1880	1127	29.88	clear	—	6.94	1208	-92	0.20	26.07	18.69
2820	1130	29.88	clear	—	6.94	1220	-93	0.19	18.70	18.69
3760	1133	29.88	clear	—	6.94	1226	-93	0.15	17.42	18.66
4700	1135	29.88	clear	—	6.93	1231	-94	0.13	10.36	18.63
5640	1138	29.88	clear	—	6.93	1235	-94	0.09	9.829	18.62

M. Mawdsley 10/8/14

Start Time: 1122 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1138 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 Sample Time: 1140 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: none

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 5640 mL

LOW FLOW GROUNDWA...R SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW | PROJECT NUMBER: 21562973.03004 | FIELD PERSONNEL: M. Mauskar & L. Voss

DATE: 10-8-14 | WEATHER: Sunny, breezy 60°

MONITORING WELL ID: MW-6C | SAMPLE ID: MW6C-ROX-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 90.28 ft
Depth to Water (btoc): 29.67 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 84.95 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): ~~60.61~~ 60.61 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 87.78 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1119* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3356 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	~~829~~ 1029 N	29.67	clear	hydrocarbon	7.09	1000	-115	1.01	48.20	18.44
1200	~~830~~ 1032 N	29.67	Clear		7.07	996.9	-120	0.33	41.78	18.28
2400	1035	29.67	Clear		7.07	997.4	-123	0.16	51.27	18.25
3600	1038	29.67	Clear		7.07	1000	-125	0.11	30.88	18.24
4800	1041	29.67	clear		7.07	1004	-126	0.08	25.46	18.22
6000	1044	29.67	Clear		7.07	1005	-127	0.06	11.93	18.22
8400	1046	29.67	Clear		7.07	1004	-128	0.06	8.882	18.22

M. Mauskar 10/8/14

Start Time: ~~829~~ 1029 N | Elapsed Time (min): 18 | Water Quality Meter ID & SN: TROLL 9500 -- RE5206

Stop Time: 1047 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 | Sample Time: 1050 | Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 8400 mL

2-55

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M.Manska, S.Voss

DATE: 10-8-14 WEATHER: Sunny, cool breezy 60°

MONITORING WELL ID: MW-6D SAMPLE ID: MW6D-ROX-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 110.05 ft
Depth to Water (btoc): 29.53 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 104.72 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): 80.52 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ~~105.05~~ 107.55 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1230* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3690 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0915	29.53	very cloudy	hydrocarbon	7.03	1607	-141	0.10	1212	17.90
1200	0919	29.55	cloudy	—	7.03	1608	-143	0.09	450.9	17.78
2400	0922	29.55	cloudy	—	7.03	1617	-143	0.07	189.0	17.77
3600	0925	29.55	cloudy	—	7.04	1624	-143	0.07	75.45	17.78
4800	0928	29.55	cloudy	—	7.04	1627	-142	0.06	43.44	17.78
6000	0931	29.55	clear	—	7.04	1630	-142	0.04	22.44	17.78
7200	0934	29.55	clear	—	7.04	1631	-142	0.04	16.57	17.78
~~8400~~	0937	29.55	clear	—	7.04	1632	-142	0.04	12.85	17.79
9600	0940	29.55	clear	—	7.04	1632	-142	0.04	10.90	17.80
10800	0943	29.55	clear	—	7.04	1633	-142	0.04	9.393	17.79

M. Manska 10/8/14

Start Time: 0915 Elapsed Time (min): 27 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 0943 Average Purge Rate (mL/min): 400 Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 Sample Time: 0945 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: Dup

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 10800 mL

2-06

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: MManske, S.Voss

DATE: 10-16-14 WEATHER: Warmer, Sunny, breezy 65°

MONITORING WELL ID: MW-7 SAMPLE ID:

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.92 ft
Depth to Water (btoc): 41.31 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 42.92 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.61 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 47.92 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 67.7 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1307	41.33	clear	hydrocarbon	6.84	1504	-88	0.28	17.89	19.76
800	1309	41.33	clear		6.83	1513	-94	0.13	23.03	19.81
1600	1311	41.33	clear		6.83	1544	-94	0.06	24.42	19.82
2400	1313	41.32	clear		6.84	1564	-97	0.04	22.41	19.80
3200	1316	41.33	clear		6.85	1578	-100	0.03	20.67	19.79
4000	1318	41.33	clear		6.85	1587	-101	0.02	17.20	19.79
4800	1320	41.33	clear		6.85	1595	-103	0.01	13.47	19.81
5600	1322	41.33	clear		6.86	1601	-103	0.01	10.92	19.80
6400	1324	41.33	clear		6.86	1606	-104	-0.00	9.081	19.78

Start Time: 1307 Elapsed Time (min): 17 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1324 Average Purge Rate (mL/min): 400 Date Calibrated: 10-16-14

SAMPLING DATA

Sample Date: 10-16-14 Sample Time: 1330 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: Dup

VOA Vials, No Headspace ☑ Initials:

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 6400 mL

1.57

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske, S. Voss

DATE: 10-16-14 WEATHER: Cool, sunny, breezy 55°

MONITORING WELL ID: MW-8 SAMPLE ID: MW8-Rox-101614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 43.60 ft
Depth to Water (btoc): 32.23 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.60 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.37 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 38.6 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 68.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1015	32.23	cloudy	hydrocarbon	6.75	1756	-61	0.08	235.5	19.01
800	1017	32.23	cloudy		6.75	1765	-68	0.06	129.9	19.07
1600	1019	32.23	cloudy		6.75	1769	-73	0.04	77.25	19.11
2400	1021	32.23	cloudy		6.73	1771	-77	0.03	47.78	19.13
3200	1023	32.23	cloudy		6.76	1772	-80	0.03	38.33	19.16
4000	1025	32.25	cloudy		6.76	1774	-82	0.02	29.62	19.24
4800	1027	32.25	clear		6.76	1773	-84	0.02	27.03	19.28
5600	1029	32.25	clear		6.76	1771	-85	0.01	23.47	19.27
6400	1032	32.25	clear		6.76	1771	-86	0.01	20.06	19.29
7200	1034	32.25	clear		6.76	1772	-86	0.02	17.63	19.30
8000	1036	32.25	clear		6.76	1771	-87	0.01	15.10	19.31
8800	1038	32.25	clear		6.76	1773	-88	0.01	12.12	19.30
9600	1040	32.25	clear		6.76	1773	-88	0.01	11.31	19.34
10400	1042	32.25	clear		6.76	1772	-88	0.00	10.18	19.32
11200	1044	32.25	clear		6.76	1772	-89	-0.00	9.385	19.31

Start Time: 1015 Elapsed Time (min): 29 Water Quality Meter ID & SN: TROLL 9500 – R285206

Stop Time: 1044 Average Purge Rate (mL/min): 400 Date Calibrated: 10-16-14

SAMPLING DATA

Sample Date: 10-16-14 Sample Time: 1050 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace: ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 11200 mL

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mankin, S Voss

DATE: 10-7-14 WEATHER: Breezy, sunny 70°

MONITORING WELL ID: MW-9 SAMPLE ID: MW9-ROX-100714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.78 ft
Depth to Water (btoc): 43.52 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 46.45 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 13.26 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 51.78 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 918* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2753 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% mS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1317	43.52	clear	—	6.73	1388	-51	0.52	20.96	19.08
880	1319	43.52	clear	—	6.73	1399	-54	0.41	13.97	19.07
1760	1322	43.52	clear	—	6.73	1403	-55	0.34	11.38	19.13
2640	1324	43.52	clear	—	6.73	1406	-56	0.26	9.003	19.06
3520	1326	43.52	clear	—	6.73	1408	-58	0.20	8.142	18.98

M. Mankin 10/7/14

Start Time: 1317 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 – RA5206
Stop Time: 1326 Average Purge Rate (mL/min): 400 Date Calibrated: 10-7-14

SAMPLING DATA

Sample Date: 10-7-14 Sample Time: 1330 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —
VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 3520 mL

N. 09

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mankin, S. Voss

DATE: 10-7-14 WEATHER: Breezy, Cloudy

MONITORING WELL ID: MW-10 SAMPLE ID: MW-10-Rox-100714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 54.76 ft
Depth to Water (btoc): 43.58 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.18 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 49.76 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 907* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2720 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1115	43.58	clear	—	6.83	1840	-107	0.75	25.30	19.41
880	1117	43.58	clear	—	6.83	1849	-112	0.32	29.67	19.46
1760	1120	43.58	clear	—	6.83	1851	-115	0.18	26.29	19.50
2640	1124	43.58	clear	—	6.83	1851	-117	0.13	23.09	19.53
3520	1124	43.58	clear	—	6.83	1851	-118	0.10	18.82	19.49
4400	1127	43.58	clear	—	6.83	1849	-119	0.08	15.76	19.53
5280	1129	43.58	clear	—	6.83	1849	-120	0.07	12.56	19.56
6160	1131	43.58	clear	—	6.83	1849	-120	0.05	11.09	19.56
7040	1134	43.60	clear	—	6.83	1849	-121	0.05	9.852	19.57

M. Mankin 10/7/14

Start Time: 1115 Elapsed Time (min): 19 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1134 Average Purge Rate (mL/min): 400 Date Calibrated: 10-7-14

SAMPLING DATA

Sample Date: 10-7-14 Sample Time: 1135 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7040 mL

2.05

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske, S. Voss

DATE: 10-7-14 WEATHER: Cloudy, Temp 59°F

MONITORING WELL ID: MW-11 SAMPLE ID: MW11-ROX-100714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 51.99 ft
Depth to Water (btoc): 40.88 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 41.66 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.11 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 46.99 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 1.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~ µS/cm	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
	STABLE: (over 3 readings)				+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	0913	40.89	clear	—	6.76	1460	-116	0.38	34.31	17.47
800	0915	40.89	clear	—	6.76	1469	-119	0.18	45.72	17.71
1600	0918	40.89	clear	—	6.76	1477	-120	0.11	65.80	17.83
2400	0920	40.89	clear	—	6.76	1485	-121	0.08	77.47	17.88
3200	0922	40.89	clear	—	6.76	1491	-120	0.07	76.15	17.92
4000	0925	40.89	clear	—	6.76	1498	-121	0.05	66.23	17.95
4800	0927	40.89	clear	—	6.77	1504	-121	0.04	57.00	17.98
5600	0929	40.89	clear	—	6.77	1510	-121	0.03	46.98	18.02
6400	0931	40.89	clear	—	6.77	1515	-121	0.02	39.02	18.04
7200	0933	40.89	clear	—	6.77	1521	-121	0.02	34.20	18.07
8000	0936	40.89	clear	—	6.77	1525	-121	0.01	28.75	18.08
8800	0938	40.89	clear	—	6.77	1528	-122	0.01	24.45	18.10
9600	0940	40.89	clear	—	6.76	1533	-121	0.00	21.22	18.11
10400	0943	40.89	clear	—	6.76	1536	-122	-0.00	18.59	18.13
11200	0945	40.89	clear	—	6.76	1540	-122	-0.01	16.83	18.11
12000	0947	40.89	clear	—	6.76	1542	-122	-0.01	15.37	18.13

Start Time: 0913 Elapsed Time (min): 43 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 0956 Average Purge Rate (mL/min): 400 Date Calibrated: 10-7-14

SAMPLING DATA

Sample Date: 10-7-14 Sample Time: 1000 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: EB

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 15200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW

PROJECT NUMBER: 21562973 03004

FIELD PERSONNEL: M. Mansker / S. Voss

DATE: 10-7-14

MONITORING WELL ID: MW-11

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
12800	0949	40.89	clear	—	6.76	1545	-121	-0.01	14.59	18.14
13600	0952	40.89	clear	—	6.76	1548	-121	-0.01	13.32	18.15
14400	0954	40.89	clear	—	6.76	1550	-121	-0.01	13.08	18.17
15200	0956	40.89	clear	—	6.76	1553	-121	-0.01	12.87	18.19

Melissa Mansker
10/7/14

2 of

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mansker, S. Voss

DATE: 10-6-14 WEATHER: Sunny, breezy 70°

MONITORING WELL ID: MW-12 SAMPLE ID: MW12-ROX-100614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.25 ft
Depth to Water (btoc): 40.98 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 41.92 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 11.27 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 47.25 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1519	41.00	clear	—	6.87	1123	181	0.60	34.79	19.18
800	1524	41.00	clear	—	6.86	1103	188	0.47	30.59	19.00
1600	1523	41.00	clear	—	6.86	1086	193	0.54	23.48	18.93
2400	1526	41.00	clear	—	6.85	1072	197	0.37	19.60	18.91
3200	1528	41.00	clear	—	6.85	1062	200	0.38	17.83	18.92
4000	1530	41.00	clear	—	6.85	1055	201	0.37	14.31	18.92
4800	1532	41.00	clear	—	6.84	1051	202	0.36	19.91	18.95
5600	1535	41.00	clear	—	6.84	1041	202	0.28	21.01	19.00
6400	1537	41.00	clear	—	6.84	1038	202	0.29	19.95	19.05
7200	1539	41.00	clear	—	6.84	1035	202	0.32	19.80	19.09

M. Mansker 10-6-14

Start Time: 1519 Elapsed Time (min): 20 Water Quality Meter ID & SN: TROLL 9500 – R25206
Stop Time: 1539 Average Purge Rate (mL/min): 400 Date Calibrated: 10-6-14

SAMPLING DATA

Sample Date: 10-6-14 Sample Time: 1545 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —
VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7200 mL

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LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Marsicano, S. Voss

DATE: 10-10-14 WEATHER: Cool, cloudy/50°

MONITORING WELL ID: MW-13 SAMPLE ID: MW13-ROX-101014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 35.82 ft
Depth to Water (btoc): 27.48 ft
Depth to LNAPL/DNAPL (btoc): – ft
Depth to Top of Screen (btoc): 25.57 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.34 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 31.65 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell: 801* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2402 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 83.4 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1458	27.49	cloudy	hydrocarbon	6.75	1478	-100	0.23	118.5	18.86
720	1500	27.49	cloudy		6.74	1482	-105	0.08	125.5	19.12
1440	1502	27.49	cloudy		6.73	1484	-108	0.02	101.8	19.30
2160	1504	27.49	cloudy		6.73	1485	-110	0.00	67.42	19.35
2880	1506	27.49	cloudy		6.73	1487	-111	-0.01	40.87	19.39
3600	1508	27.49	cloudy		6.72	1488	-113	-0.02	27.08	19.44
4320	1510	27.49	cloudy		6.72	1490	-114	-0.03	18.13	19.45
5040	1512	27.50	clear		6.72	1489	-114	-0.04	14.77	19.46
5760	1514	27.50	clear		6.72	1490	-115	-0.04	10.60	19.46
6480	1516	27.50	clear		6.72	1491	-115	-0.05	7.922	19.48

M.M 10-10-14

Start Time: 1458 Elapsed Time (min): 18 Water Quality Meter ID & SN: TROLL 9500 – R25206
Stop Time: 1516 Average Purge Rate (mL/min): 400 Date Calibrated: 10-10-14

SAMPLING DATA

Sample Date: 10-10-14 Sample Time: 1520 Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —
VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 6480 mL

L-57

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mankin, L. Rathnow

DATE: 10-14-14 WEATHER: Rain, 50°

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-Rox-101414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.00 ft
Depth to Water (btoc): 31.65 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 33.42 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 12.35 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 39 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 35.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0949	31.65	clear	—	6.71	1163	-91	0.32	4.873	18.48
800	0951	31.65	clear	—	6.73	1175	-98	0.10	5.981	18.59
1600	0953	31.65	clear	—	6.74	1188	-102	0.04	5.230	18.67
2400	0955	31.65	clear	—	6.74	1196	-105	0.02	4.697	18.74
3200	0958	31.65	clear	—	6.74	1204	-107	-0.00	4.113	18.78

M. Mankin 10-14-14

Start Time: 0949 Elapsed Time (min): 9 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 0958 Average Purge Rate (mL/min): 400 Date Calibrated: 10-14-14

SAMPLING DATA

Sample Date: 10-14-14 Sample Time: 1000 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 3200 mL

2.54

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW | PROJECT NUMBER: 21562973.03004 | FIELD PERSONNEL: M. Manstan, S. Voss

DATE: 10-7-14 | WEATHER: Sunny, breezy 75°

MONITORING WELL ID: MW-16 | SAMPLE ID: MW16-ROX-100714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 47.31 ft
Depth to Water (btoc): 42.27 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 37.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 4.84 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 44.89 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1427	42.36	cloudy	—	6.62	1542	-95	0.30	122.9	20.26
600	1431	42.35	cloudy	—	6.61	1677	-96	0.12	104.3	19.91
1200	1432	42.35	cloudy	—	6.61	1569	-99	0.08	65.06	20.05
1800	1436	42.35	cloudy	—	6.62	1509	-101	0.07	47.24	20.16
2400	1440	42.35	cloudy	—	6.62	1487	-99	0.08	38.37	20.33
3000	1443	42.35	cloudy	—	6.62	1482	-99	0.07	32.08	20.31
3600	1446	42.35	cloudy	—	6.62	1482	-98	0.06	25.70	20.24
4200	1449	42.35	clear	—	6.61	1481	-98	0.06	20.55	20.23
4800	1452	42.35	clear	—	6.62	1479	-99	0.05	18.56	20.29
5400	1455	42.35	clear	—	6.61	1480	-99	0.05	16.25	20.43
6000	1458	42.35	clear	—	6.61	1480	-99	0.05	17.26	20.54
6600	1501	42.35	clear	—	6.61	1479	-99	0.05	20.74	20.62
7200	1504	42.35	clear	—	6.61	1480	-99	0.05	13.21	20.67
7800	1507	42.35	clear	—	6.61	1479	-99	0.05	12.13	20.78
8400	1511	42.35	clear	—	6.61	1476	-99	0.05	11.92	20.89
9000	1514	42.35	clear	—	6.61	1474	-99	0.05	12.38	20.95

Start Time: 1427 | Elapsed Time (min): 47 | Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1517 | Average Purge Rate (mL/min): 300 | Date Calibrated: 10-7-14

SAMPLING DATA

Sample Date: 10-7-14 | Sample Time: 1515 | Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 300 | QA/QCSamples: —

VOA Vials, No Headspace ☐ Initials:

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 9000 mL

NO)

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske, S. Voss

DATE: 10-10-14 WEATHER: Rain 50°

MONITORING WELL ID: MW-22 SAMPLE ID: MW22-ROX-101014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.13 ft
Depth to Water (btoc): 41.33 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.21 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.8 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 44.73 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 884* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2653 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1028	41.33	clear	—	6.74	1189	-102	0.07	13.90	20.18
800	1030	41.33	clear	—	6.74	1211	-104	0.03	13.60	20.31
1600	1032	41.33	clear	—	6.74	1229	-106	0.01	11.31	20.38
2400	1034	41.33	clear	—	6.74	1239	-107	-0.01	11.88	20.48
3200	1036	41.33	clear	—	6.74	1242	-108	-0.03	10.99	20.55

M. Manske

Start Time: 1028 Elapsed Time (min): 8 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1036 Average Purge Rate (mL/min): 400 Date Calibrated: 10-10-14

SAMPLING DATA

Sample Date: 10-10-14 Sample Time: 1040 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 3200 mL

2.47

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manker, L. Voss

DATE: 10-8-14 WEATHER: Warm, Sunny 75°

MONITORING WELL ID: MW-24 SAMPLE ID: MW24-ROX-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 49.14 ft
Depth to Water (btoc): 42.16 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 38.89 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.98 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 45.65 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1435	42.15	cloudy	—	6.81	1345	128	1.81	105.9	20.56
825	1438	42.15	cloudy	—	6.81	1337	132	1.69	62.43	19.90
1650	1441	42.15	clear	—	6.81	1329	136	1.73	32.55	19.65
2475	1444	42.15	clear	—	6.81	1321	139	1.81	17.92	19.49
3300	1447	42.15	clear	—	6.81	1321	143	1.87	11.70	19.44
4125	1450	42.15	clear	—	6.81	1321	146	1.89	7.422	19.40

M. Manker 10-8-14

Start Time: 1435 Elapsed Time (min): 15 Water Quality Meter ID & SN: TROLL 9500 – A25200

Stop Time: 1450 Average Purge Rate (mL/min): 300 Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 Sample Time: 1455 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 4125 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW | PROJECT NUMBER: 21562973.03004 | FIELD PERSONNEL: L. Rathbun, C. Williams

DATE: 10/21/14 | WEATHER: Sunny, 65°F

MONITORING WELL ID: MW-25 | SAMPLE ID: MW25-ROX-102114

INITIAL DATA

Well Diameter: 2 in
Total Well Depth (btoc): 45.70 ft
Depth to Water (btoc): 36.44 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): ft
Screen Length: 10 ft

35.70

Water Column Height (do not include LNAPL or DNAPL): 9.26 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 41.07 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell: 878.77 mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 2.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	15:17	36.47	cloudy	strong	6.72	1.571	-74	0.44	158.8	19.85
800	15:19	36.47	cloudy	strong	6.71	1.614	-78	0.36	138.8	19.92
2000	15:22	36.47	cloudy	strong	6.71	1.670	-82	0.20	90.64	19.93
2800	15:24	36.47	cloudy	strong	6.71	1.716	-85	0.12	66.21	19.99
3600	15:26	36.47	cloudy	strong	6.71	1.744	-88	0.12	51.49	20.04
4400	15:28	36.47	cloudy	strong	6.71	1.768	-90	0.11	48.13	20.06
5200	15:30	36.47	cloudy	strong	6.72	1.771	-91	0.06	44.80	20.15
6400	15:33	36.47	cloudy	strong	6.72	1.763	-92	-0.00	59.48	20.13
7200	15:35	36.47	cloudy	strong	6.72	1.776	-93	0.04	47.83	20.10
8000	15:37	36.47	clear	strong	6.72	1.787	-94	0.02	38.89	20.10
8800	15:39	36.47	clear	strong	6.72	1.795	-95	-0.02	33.09	20.08
9600	15:41	36.47	clear	strong	6.72	1.799	-96	-0.03	27.09	20.05
10300	15:44	36.47	clear	strong	6.72	1.789	-96	-0.05	30.88	19.91
11600	15:46	36.47	clear	strong	6.72	1.809	-96	-0.05	39.98	19.82
12400	15:48	36.47	clear	strong	6.73	1.817	-97	-0.03	26.25	19.87
13600	15:51	36.47	clear	strong	6.73	1.814	-98	-0.04	21.63	19.96

Start Time: 15:17 | Elapsed Time (min): Ho 38 | Water Quality Meter ID & SN: TROLL 9500 - R252206
Stop Time: 15:55 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10/21/14

SAMPLING DATA

Sample Date: 10/21/14 | Sample Time: 16:00 | Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: none
VOA Vials, No Headspace [X] Initials: JCAR

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

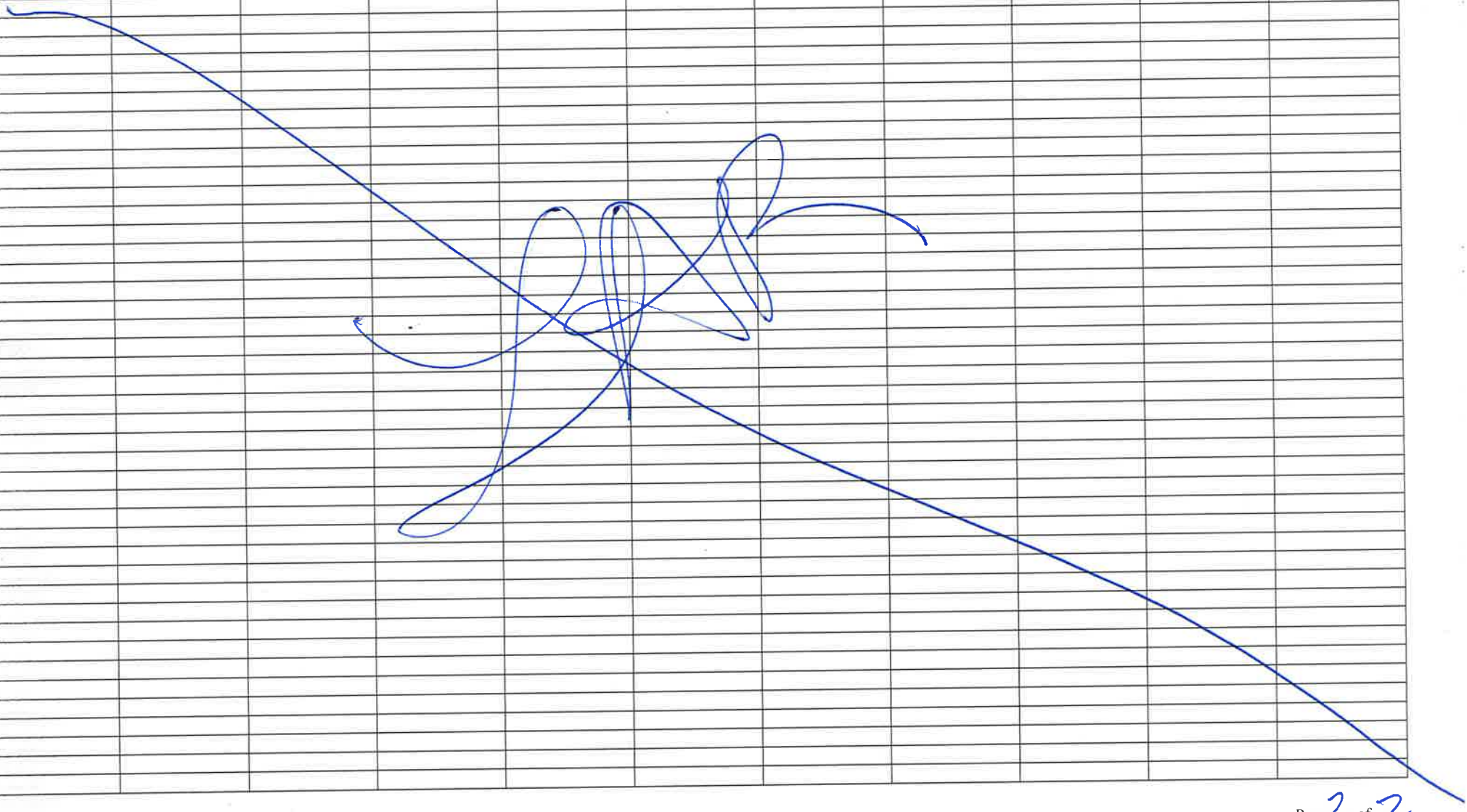
Total Purge Volume: 15,200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 215629730.03004 FIELD PERSONNEL: L. Rathrow, C. Williams

DATE: 10/21/14 MONITORING WELL ID: MW-25

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
14400	15:53	36.47	clear	strong	6.73	1.791	-98	-0.05	22.25	20.04
15200	15:55	36.47	clear	strong	6.73	1.786	-98	-0.03	20.33	20.05



LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: L. Rathbun, C. Williams

DATE: 10/21/14 WEATHER: Sunny, 65°F

MONITORING WELL ID: MW-26 SAMPLE ID: MW-26-ROX-102114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.33 ft
Depth to Water (btoc): 39.43 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): ft
Screen Length): 10 ft

38.33

Water Column Height (do not include LNAPL or DNAPL): 8.90 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: 43.88
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : 878.77 mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 3.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	14:08	39.45	cloudy	none	6.86	1.017	75	1.33	145.0	19.59
1200	14:11	39.45	cloudy	none	6.83	1.018	74	1.12	119.1	19.56
2000	14:13	39.45	cloudy	none	6.82	1.018	73	0.89	103.8	19.57
2800	14:15	39.45	cloudy	none	6.81	1.020	70	0.81	74.58	19.57
3400	14:17	39.45	cloudy	none	6.81	1.021	66	0.73	69.57	19.56
4200	14:19	39.45	cloudy	none	6.81	1.021	61	0.70	56.62	19.56
5400	14:22	39.45	cloudy	none	6.81	1.022	56	0.65	48.75	19.56
6200	14:24	39.45	cloudy	none	6.81	1.022	53	0.68	46.94	19.56
7000	14:26	39.45	clear	none	6.81	1.022	50	0.62	35.67	19.57
7800	14:28	39.45	clear	none	6.81	1.022	49	0.62	28.07	19.58
8600	14:30	39.45	clear	none	6.80	1.023	49	0.59	21.95	19.59
9400	14:33	39.45	clear	none	6.81	1.023	49	0.59	20.07	19.60
10600	14:35	39.45	clear	none	6.81	1.022	49	0.62	16.18	19.59
11400	14:37	39.43	clear	none	6.81	1.023	50	0.65	13.42	19.59
12200	14:39	39.43	clear	none	6.81	1.023	51	0.61	11.45	19.59
13400	14:42	39.43	clear	none	6.81	1.023	53	0.63	9.020	19.62

Start Time: 14:08 Elapsed Time (min): 34 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 14:42 Average Purge Rate (mL/min): 400 Date Calibrated: 10/21/14

SAMPLING DATA

Sample Date: 10/21/14 Sample Time: 14:45 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: none

VOA Vials, No Headspace ☑ Initials: LAR

COMMENTS:

~~*Flow through cell volume calculated by rugged reader used with Troll 9500~~

Total Purge Volume: 13400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: L. Rathnow, C. Williams

DATE: 10/21/14 WEATHER: Sunny 65°F

MONITORING WELL ID: MW-27 SAMPLE ID:

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 50.04 ft
Depth to Water (btoc): 41.57 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): ~~ft~~ 40.04
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.47 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 45.81 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 906.65 mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2720 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	13:01	41.73	cloudy	none	6.84	1.341	-55	1.84	436.0	18.81
800	13:03	41.73	cloudy	none	6.78	1.354	-51	1.70	281.9	18.70
1600	13:05	41.73	cloudy	none	6.76	1.356	-50	1.80	168.7	18.61
2400	13:07	41.78	cloudy	none	6.75	1.364	-51	1.84	90.70	18.62
3200	13:10	41.80	cloudy	none	6.75	1.369	-52	1.79	49.72	18.61
4000	13:12	41.85	cloudy	none	6.74	1.365	-54	1.70	31.39	18.62
5200	13:14	41.85	clear	none	6.74	1.350	-56	1.51	24.54	18.68
6000	13:16	41.81	clear	none	6.74	1.342	-58	1.33	17.16	18.72
7200 ~~6800~~	13:19	41.81	clear	none	6.74	1.334	-60	1.21	12.90	18.74
8000	13:21	41.81	clear	none	6.74	1.326	-61	1.18	10.15	18.76
~~8400~~ 8800	13:23	41.81	clear	none	6.74	1.322	-62	1.11	7.042	18.71

Start Time: 13:01 Elapsed Time (min): 22 Water Quality Meter ID & SN: TROLL 9500 -- R255206

Stop Time: 13:23 Average Purge Rate (mL/min): 400 Date Calibrated: 10/21/14

SAMPLING DATA

Sample Date: 10/21/14 Sample Time: 13:25 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: none

VOA Vials, No Headspace ☑ Initials: LAR

COMMENTS:

~~* Flow through cell volume calculated by rugged reader used with Troll 9500~~

Total Purge Volume: ~~8400~~ 8800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW | PROJECT NUMBER: 21562973.03004 | FIELD PERSONNEL: L. Rathman, C. Williams

DATE: 10/21/14 | WEATHER: Sunny 60°F

MONITORING WELL ID: MW-28 | SAMPLE ID: MW28-ROX-102114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 43.86 ft
Depth to Water (btoc): 41.03 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): ~~ft~~ 33.86
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 2.83 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = 41.86 ft btoc

Volume of Flow Through Cell: 850.89 mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	10:54 ~~09:41~~	41.19	cloudy	none	6.77	1.342	-79	1.44	961.3	20.36
800	10:56	41.19	cloudy	none	6.73	1.365	-77	1.02	846.4	19.88
1600	10:58	41.19	cloudy	none	6.73	1.384	-79	0.67	567.8	19.43
2400	11:00	41.19	cloudy	none	6.73	1.400	-82	0.38	335.9	19.20
3200	11:02	41.19	cloudy	none	6.73	1.412	-85	0.19	229.4	19.04
4000	11:04	41.19	cloudy	none	6.73	1.414	-88	0.06	116.1	18.91
4800	11:06	41.19	cloudy	none	6.73	1.414	-90	0.00	106.01	18.80
6000	11:09	41.19	clear	none	6.74	1.414	-92	-0.02	33.62	18.70
6800	11:11	41.19	clear	none	6.74	1.416	-93	-0.03	19.30	18.66
7600	11:13	41.19	clear	none	6.74	1.419	-94	-0.04	12.75	18.69
8400	11:15	41.19	clear	none	6.75	1.420	-95	-0.04	8.320	18.72

Start Time: 10:54 | Elapsed Time (min): 21 | Water Quality Meter ID & SN: TROLL 9500 -- R252206
Stop Time: 11:15 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10/21/14

SAMPLING DATA

Sample Date: 10/21/14 | Sample Time: 11:25 | Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: none
VOA Vials, No Headspace ☒ Initials: LAR

COMMENTS:

~~*Flow through cell volume calculated by rugged reader used with Troll 9500~~

Total Purge Volume: 8400 mL

2.07

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mauska, S. Voss

DATE: 10-8-14 WEATHER: Sunny, warm 75°

MONITORING WELL ID: P-54 SAMPLE ID: P54-Rox-100814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.00 ft
Depth to Water (btoc): 40.88 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.00 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 22.12 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 51.94 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 912* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2737 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3% µS/cm	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. ~~(mS/cm)~~	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1525	40.88	clear	—	6.83	1377	170	5.63	16.23	18.53
800	1527	40.88	clear	—	6.82	1384	169	5.51	12.98	18.23
1600	1529	40.85	clear	—	6.81	1393	170	5.29	12.93	18.22
2400	1532	40.85	clear	—	6.81	1400	171	4.93	11.91	18.17
3200	1534	40.85	clear	—	6.80	1405	171	4.59	10.41	18.16
4000	1536	40.86	clear	—	6.79	1408	172	4.23	8.358	18.19
4800	1538	40.86	clear	—	6.78	1412	172	3.86	6.633	18.20
5600	1541	40.86	clear	—	6.78	1416	172	3.58	5.734	18.22
6400	1543	40.86	clear	—	6.77	1419	172	3.36	5.322	18.22
7200	1545	40.86	clear	—	6.77	1422	173	3.21	4.723	18.24
8000	1548	40.86	clear	—	6.77	1425	173	3.07	4.602	18.27
8800	1550	40.86	clear	—	6.77	1428	173	2.96	4.538	18.27
9600	1552	40.86	clear	—	6.76	1430	172	2.86	4.556	18.30
10400	1554	40.86	clear	—	6.76	1432	173	2.79	4.499	18.30

Start Time: 1525 Elapsed Time (min): ~~30~~ 29 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1554 Average Purge Rate (mL/min): 400 Date Calibrated: 10-8-14

SAMPLING DATA

Sample Date: 10-8-14 Sample Time: 1555 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 10400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M.Miller, S.Wipfler

DATE: 10-14-14 WEATHER: Rain, cloudy 50°

MONITORING WELL ID: P-55 SAMPLE ID: —

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 50.68 ft
Depth to Water (btoc): 42.75 ft
Depth to LNAPL/DNAPL (btoc): 42.57 ft
Depth to Top of Screen (btoc): 40.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 7.93 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

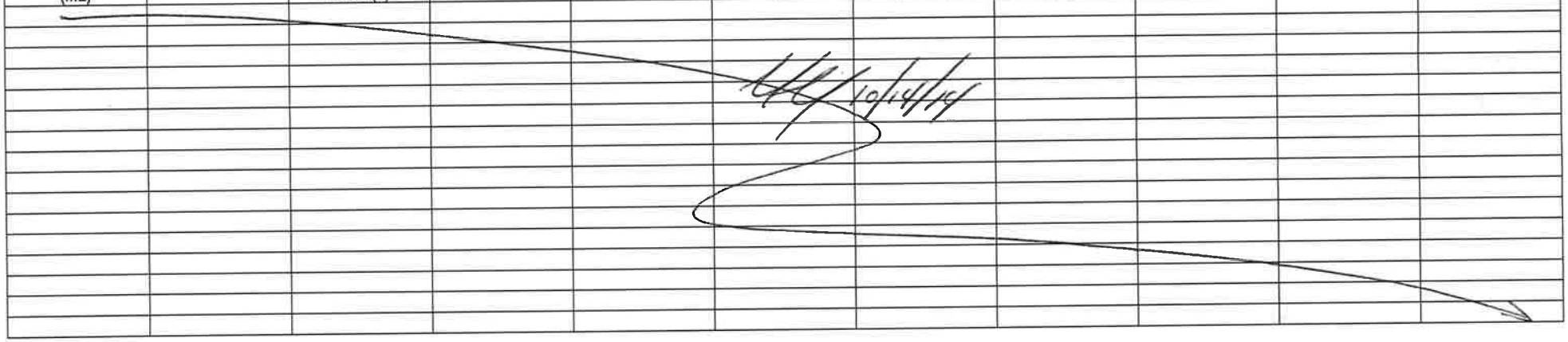
Volume of Flow Through Cell : 884* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2653 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 142.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)



Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 -- —

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Product gauged by M.Miller & S.Wipfler 10-14-14

Well not sampled due to LNAPL presence.

Total Purge Volume: — mL

2.16

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske

DATE: 10-13-14 WEATHER: Rain 55

MONITORING WELL ID: P-56 SAMPLE ID: P56-ROX-101314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.82 ft
Depth to Water (btoc): 45.05 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 40.82 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 20.77 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = – ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 55.48 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = – ft btoc

Volume of Flow Through Cell : 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: – ppm
Wellbore PID/FID Reading: 0.1 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
–	0931	45.06	clear	–	6.65	1264	-101	0.30	6.946	22.77
900	0933	45.06		–	6.65	1253	-104	0.12	7.957	23.18
1800	0936	45.06		–	6.65	1248	-106	0.04	17.17	23.46
2700	0938	45.06		–	6.65	1247	-108	0.01	20.96	23.54
3600	0941	45.06		–	6.65	1245	-109	-0.00	26.11	23.60
4500	0943	45.06		–	6.65	1243	-110	-0.01	6.140	23.68

M. Manske 10/13/14

Start Time: 0931 Elapsed Time (min): ~~0950~~ 12 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 0943 Average Purge Rate (mL/min): 400 Date Calibrated: 10-13-14

SAMPLING DATA

Sample Date: 10-13-14 Sample Time: 0950 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: –

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 4500 mL

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mauskay C. Rathbone

DATE: 10-14-14 WEATHER: Rain 50°

MONITORING WELL ID: P-57 SAMPLE ID: P57-ROX-101414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.46 ft
Depth to Water (btoc): 45.00 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 40.46 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 20.46 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 55.23 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.3 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1606	45.00	clear	hydrocarbon	6.64	1427	-101	0.55	19.50	20.52
868	1608	45.00	clear		6.63	1425	-108	0.13	17.99	20.81
1736	1610	45.00	clear		6.62	1424	-111	0.04	18.04	21.12
2604	1612	45.00	clear		6.62	1423	-114	0.01	17.26	21.43
3472	1615	45.00	clear		6.62	1422	-116	-0.02	14.59	21.62
4340	1617	45.00	clear		6.62	1419	-117	-0.03	18.68	21.69
5208	1620	45.00	clear		6.62	1417	-118	-0.03	16.32	21.68
6076	1622	45.00	clear		6.62	1416	-119	-0.04	18.74	21.66
6944	1625	45.00	clear		6.62	1415	-120	-0.02	14.90	21.72
7812	1627	45.00	clear		6.62	1414	-120	-0.03	8.907	21.75

Start Time: 1606 Elapsed Time (min): 21 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1627 Average Purge Rate (mL/min): 400 Date Calibrated: 10-14-14

SAMPLING DATA

Sample Date: 10-14-14 Sample Time: 1630 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: Dup

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7812 mL

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW | PROJECT NUMBER: 21562973.03004 | FIELD PERSONNEL: M. Mawskey, L. Rathnow

DATE: 10-15-14 | WEATHER: Cloudy, breezy 50°

MONITORING WELL ID: P-58 | SAMPLE ID: P58-ROX-101514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.21 ft
Depth to Water (btoc): 43.14 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 40.21 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 22.07 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 54.17 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 28.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1132	43.14	clear	hydrocabon	6.60	1437	-85	0.18	9.687	20.46
880-1760	1134	43.14	↓	↓	6.59	1437	-87	0.08	9.039	20.77
1760	1136	43.14			6.59	1441	-89	0.03	8.823	21.01
2640	1138	43.14			6.58	1440	-90	0.00	7.873	21.08
3520	1141	43.14			6.58	1441	-89	-0.00	6.773	21.05

M. Mawskey 10-15-14

Start Time: 1132 | Elapsed Time (min): 9 | Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1141 | Average Purge Rate (mL/min): 400 | Date Calibrated: 10-18-14

SAMPLING DATA

Sample Date: 10-15-14 | Sample Time: 1145 | Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 3520 mL

2.20
936

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M Manske, L. Rathnow

DATE: 10-14-14 WEATHER: Rain 55°

MONITORING WELL ID: P-59 SAMPLE ID: P59-ROX-101414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 72.91 ft
Depth to Water (btoc): 46.18 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 47.91 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 26.73 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 60.46 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 150.5 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
49400	1522	46.18	clear	strong hydrocabon	6.63	1350	-87	0.43	6.030	21.39
50,336	1524	46.18	clear		6.62	1354	-92	0.07	8.452	21.41
51,272	1527	46.18	clear		6.62	1353	-96	-0.00	9.537	21.66
52,208	1530	46.18	clear		6.62	1352	-98	-0.03	8.377	21.76
53,144	1532	46.18	clear		6.62	1354	-100	-0.04	12.77	21.70
54,080	1534	46.18	clear		6.62	1354	-101	-0.04	26.43	21.74
55,016	1536	46.18	clear		6.62	1354	-102	-0.05	37.53	21.83
55952	1539	46.18	clear		6.62	1361	-103	-0.06	8.521	21.78

H. Manske 10-14-14

Start Time: 1522 Elapsed Time (min): 17 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1539 Average Purge Rate (mL/min): 400 Date Calibrated: 10-14-14

SAMPLING DATA

Sample Date: 10-14-14 Sample Time: 1545 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: EB

VOA Vials, No Headspace ☑ Initials: HM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 55,952 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Hamstra, S. Voss

DATE: 10-16-14 WEATHER: Sunny, 65°

MONITORING WELL ID: P-60-12S SAMPLE ID: —

INITIAL DATA

Well Diameter): 0.75 in
Total Well Depth (btoc): 23.84 ft
Depth to Water (btoc): 18.81 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 13.84 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 5.03 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: — ppm

PURGE DATA

Pump Type: —

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
—										

10/16/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: none

VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS: Not enough water to sample 10-16-14
23.84ft - 18.81ft = 5.03ft
5.03ft × 0.041 gal/ft = 0.21 gal H_2O

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Hawkins, S. Voss

DATE: 10-16-14 WEATHER: Sunny 65°

MONITORING WELL ID: P-60-13S SAMPLE ID: —

INITIAL DATA

Well Diameter): 0.75 in
Total Well Depth (btoc): 20.00 ft
Depth to Water (btoc): 17.42 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 2.58 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: — ppm

PURGE DATA

Pump Type: _____

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

M. Hawkins 10/16/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ Initials: —

COMMENTS:

* Not enough water to sample 10-16-14
20.00 ft - 17.42 ft = 2.58 ft
2.58 ft × 0.041 gal/ft = 0.11 gal H2O

Total Purge Volume: — mL

2.06

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske

DATE: 10-14-14 WEATHER: Rain 50°

MONITORING WELL ID: P-66 SAMPLE ID: P66-ROX-101414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): 34.48 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.72 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 25.24 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 47.22 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ____ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 896* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2687 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.2 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1032	34.48	clear	hydrocarbon	6.51	1113	-72	0.53	12.84	19.08
800	1035	34.48	clear		6.49	1118	-78	0.16	13.15	19.49
1600	1037	34.48	clear		6.49	1113	-81	0.04	12.14	19.58
2400	1039	34.48	clear		6.49	1107	-83	-0.00	12.46	19.67
3200	1041	34.48	clear		6.50	1105	-84	-0.02	10.91	19.73
4000	1043	34.48	clear		6.50	1102	-85	-0.03	10.50	19.77
4800	1046	34.48	clear		6.50	1098	-86	-0.04	10.97	19.76

M. Manske 10-14-14

Start Time: 1032 Elapsed Time (min): 14 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1046 Average Purge Rate (mL/min): 400 Date Calibrated: 10-14-14

SAMPLING DATA

Sample Date: 10-14-14 Sample Time: 1050 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 4800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Miller, S. Wipfler

DATE: 10-14-14 WEATHER: Rain, cloudy, windy, 50°

MONITORING WELL ID: P-68 SAMPLE ID: —

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 70.26 ft
* Depth to Water (btoc): 44.42 ft
Depth to LNAPL/DNAPL (btoc): 44.35 ft
Depth to Top of Screen (btoc): 45.26 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 25.84 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 253.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

10/14/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS:

* Product gauged by M. Miller, S. Wipfler 10-14-14

Well not sampled due to LNAPL presence.

Total Purge Volume: — mL

2.15

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manstan, L. Rathnow

DATE: 10-14-14 WEATHER: Cool, breezy 50°

MONITORING WELL ID: P-74 SAMPLE ID: P74-ROX-101414

INITIAL DATA

Well Diameter): 4 in
Total Well Depth (btoc): 69.43 ft
Depth to Water (btoc): 41.48 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 27.95 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 56.93 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 968* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2904 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 1.9 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1126	41.48	cloudy	hydrocarbon	7.44	166.2	36	7.05	47.88	18.38
900	1129	41.48	cloudy		7.35	164.7	45	7.00	46.33	18.33
1800	1131	41.48	cloudy		7.31	164.4	51	6.98	44.68	18.39
2700	1134	41.48	cloudy		7.29	164.5	55	6.96	43.57	18.38
3600	1136	41.48	cloudy		7.28	164.6	59	6.97	55.54	18.27
4500	1139	41.48	cloudy		7.27	164.7	62	7.00	10.46	18.28
5400	1141	41.48	cloudy		7.26	165.0	65	7.10	18.40	18.34
6300	1143	41.48	clear		7.26	165.1	68	7.10	9.641	18.49

Start Time: 1126 Elapsed Time (min): 17 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1143 Average Purge Rate (mL/min): 400 Date Calibrated: 10-14-14

SAMPLING DATA

Sample Date: 10-14-14 Sample Time: 1145 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: mL

2.08

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M.M

DATE: 10-15-14 WEATHER: Cloudy 50°

MONITORING WELL ID: P-93A SAMPLE ID: P93A-Rox-101514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.17 ft
Depth to Water (btoc): 45.06 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 48.17 ft
Screen Length): 15 ft

Water Column Height (do not include LNAPL or DNAPL): 18.11 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 55.67 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 2865* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 8596 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
*37850	1014	45.06	clear	hydrocarbon	6.81	1900	-62	3.91	14.90	20.14
38650	1017	45.06			6.82	1911	-61	4.37	37.33	20.06
39450	1019	45.06			6.82	1910	-59	4.23	38.66	20.04
40250	1021	45.06			6.81	1913	-57	4.45	35.31	20.11
41050	1023	45.06			6.78	1939	-57	3.99	23.96	20.14
41850	1025	45.06			6.77	1934	-58	3.33	74.62	20.13
42650	1028	45.06			6.77	1931	-58	3.32	37.77	20.14
43450	1030	45.06			6.77	1934	-57	3.25	12.67	20.16
44250	1033	45.06			6.76	1941	-57	3.21	53.40	20:17
45050	1036	45.06	murrock						30.78	
45850	1038	45.06			6.77	1933	-56	3.67	12.76	20.16
46650	1040	45.06			6.78	1924	-56	3.50	11.36	2014
47450	1042	45.06	↓	↓	6.77	1949	-56	3.50	9.655	20.15

Start Time: 1014 Elapsed Time (min): 28 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1042 Average Purge Rate (mL/min): 400 Date Calibrated: 10-15-14

SAMPLING DATA

Sample Date: 10-15-14 Sample Time: 1045 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: Dup

VOA Vials, No Headspace/☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

*Well purged for WRR program prior to Roxana Low Flow stabilization.

Total Purge Volume: 47,450 mL

2.27

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Maunsell, C. Rathrow

DATE: 10-15-14 WEATHER: Cool, breezy, cloudy 50°

MONITORING WELL ID: P-93B SAMPLE ID: P93B-Rox-10-1514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 76.60 ft
Depth to Water (btoc): 45.15 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 74.60 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 31.45 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 75.60 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 3635* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 10904 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
*60560	1449	45.15	clear	hydrocarb	6.87	1648	-115	0.12	1.605	18.71
61560	1452	45.15	↓	↓	6.87	1639	-115	0.37	6.335	18.68
62560	1454	45.15			6.87	1636	-115	0.24	4.775	18.69
63560	1457	45.15			6.87	1642	-115	0.18	2.948	18.71

M. Maunsell 10-15-14

Start Time: 1449 Elapsed Time (min): 8 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1457 Average Purge Rate (mL/min): 400 Date Calibrated: 10-15-14

SAMPLING DATA

Sample Date: 10-15-14 Sample Time: 1500 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

*Well purged for WRR program prior to Roxana LowFlow stabilization.

Total Purge Volume: 63560 mL

2.43
1100

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M.Mawson, L.Rathnow

DATE: 10-15-14 WEATHER: Cool, breezy, 55°

MONITORING WELL ID: P-93C SAMPLE ID: P93C-ROX-101514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 96.26 ft
Depth to Water (btoc): 44.99 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 94.26 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 51.27 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 95.26 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 2791* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 8374 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
* 105980	1335	44.99	clear	hydrocarbon	6.93	1322	-79	0.02	3.531	18.27
107080	1338	44.99	↓	↓	6.92	1319	-80	0.01	7.994	18.38
108180	1341	44.99			6.91	1320	-81	-0.01	8.933	18.37

M. Mawson 10-15-14

Start Time: 1335 Elapsed Time (min): 6 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1341 Average Purge Rate (mL/min): 400 Date Calibrated: 10-15-14

SAMPLING DATA

Sample Date: 10-15-14 Sample Time: 1345 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: My

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

* Well purged for WRR program prior to Roxana Low Flow Stabilization.

Total Purge Volume: 108,180 mL

TOT 080
170,325
3.13
1300

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manske, L. Rathmann

DATE: 10-15-14 WEATHER: Cool, breezy 50°

MONITORING WELL ID: P-93D SAMPLE ID: P93D-Rox-101514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 128.00 ft
Depth to Water (btoc): 45.14 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 125.75 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 82.86 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 127 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1353* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 4058 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
*170325	1420	45.14	clear	hydrocabon	6.92	1723	-91	0.07	2.180	18.68
171625	1423	45.14	↓	↓	6.91	1724	-96	-0.01	3.001	18.73
172925	1427	45.14	↓	↓	6.91	1725	-99	-0.04	5.379	18.72

Start Time: 1420 Elapsed Time (min): 7 Water Quality Meter ID & SN: TROLL 9500 – R25206

Stop Time: 1427 Average Purge Rate (mL/min): 400 Date Calibrated: 10-15-14

SAMPLING DATA

Sample Date: 10-15-14 Sample Time: 1430 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

* Well purged for WRR program prior to Roxana Low Flow Stabilization.

Total Purge Volume: 172,925 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW **PROJECT NUMBER:** 21562973.03004 **FIELD PERSONNEL:** M. Currier, L. Rathbun

DATE: 11/4/14 **WEATHER:** Rainy 50°F

MONITORING WELL ID: P-93D **SAMPLE ID:** P93D-ROX-110414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 128.00 ft
Depth to Water (btoc): 44.97 ~~44.97~~ ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 125.75 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 83.~~97~~03 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 126.75 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1353* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 4058 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 2.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1300	44.97	Clear	Slight	6.88	1.664	-106	0.19	4.037	17.54
1600	1304	44.97	Clear	Slight	6.88	1.668	-102	0.13	7.619	17.56
3200	1308	44.97	Clear	Slight	6.88	1.654	-103	0.12	11.32	17.57
4800	1312	44.97	Clear		6.88	1.651	-104	0.11	9.221	17.63

11/4/14

Start Time: 1300 Elapsed Time (min): 12 Water Quality Meter ID & SN: TROLL 9500 -- R254194

Stop Time: 1312 Average Purge Rate (mL/min): 400 Date Calibrated: 11/4/14

SAMPLING DATA

Sample Date: 11/4/14 Sample Time: 1315 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: none

VOA Vials, No Headspace ☑ Initials: mcc

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 4800 mL

2.01

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manskar, S. Voss

DATE: 10-17-14 WEATHER: Cool sunny 60°

MONITORING WELL ID: P-114 SAMPLE ID: P114-Rox-101414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.67 ft
Depth to Water (btoc): 29.43 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 32.67 ft
Screen Length): 20 ft

Water Column Height (do not include LNAPL or DNAPL): 23.24 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 42.67 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 1596* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 4789 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.4 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
			STABLE: (over 3 readings)		+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
0	0936	29.43	turbid	hydrocarbon	9.15	1183	-87	3.23	102.0	19.73
800	0938	29.43			8.89	1181	-87	3.13	91.58	19.74
1600	0940	29.43			8.70	1182	-87	3.00	69.70	19.78
2400	0942	29.43			8.51	1182	-84	2.93	62.41	19.82
3200	0944	29.43			8.34	1188	-85	3.04	53.27	19.86
4000	0946	29.43			8.18	1195	-94	2.98	53.97	19.89
4800	0949	29.43			8.05	1201	-108	2.98	60.04	19.94
5600	0951	29.43			7.94	1210	-118	3.04	62.45	19.99
6400	0953	29.43			7.85	1215	-123	3.70	62.88	19.96
7200	0955	29.43			7.77	1188	-124	3.12	217.0	20.00
8000	0958	29.43			7.72	1228	-125	2.99	70.55	20.03
8860	1000	29.43			7.67	1234	-123	3.29	78.69	20.04
9600	1002	29.43			7.64	1239	-123	3.00	70.77	20.04
10400	1004	29.43			7.61	1246	-121	2.77	75.81	20.06
11200	1007	29.43			7.60	1248	-119	2.44	63.57	20.19
12000	1009	29.43			7.59	1250	-116	2.32	64.75	20.25

Start Time: 0936 Elapsed Time (min): 122 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1138 Average Purge Rate (mL/min): 400 Date Calibrated: 10-17-14

SAMPLING DATA

Sample Date: 10-17-14 Sample Time: 1145 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 44800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 PROJECT NUMBER: 215629730.3004 FIELD PERSONNEL: M. Mauska, S. Voss

DATE: 10-17-14 MONITORING WELL ID: P-114

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
12800	1011	29.43	turbid	hydrocarbon	7.58	1252	-114	2.37	72.30	20.33
13600	1013	29.43			7.58	1255	-112	2.37	67.86	20.42
14400	1015	29.43			7.55	1261	-110	2.23	77.91	20.50
15200	1018	29.43			7.54	1263	-109	2.29	69.72	20.51
16000	1020	29.43			7.53	1267	-108	2.37	70.54	20.58
16806	1023	29.43			7.53	1269	-108	2.36	67.44	20.61
17600	1025	29.43			7.52	1272	-109	2.31	51.03	20.62
18400	1027	29.43			7.51	1274	-109	2.28	51.67	20.68
19200	1029	29.43			7.50	1281	-110	2.39	46.29	20.72
20000	1031	29.43			7.48	1287	-111	2.39	38.15	20.81
20800	1033	29.43			7.47	1291	-112	2.35	38.16	20.76
21600	1035	29.43			7.48	1298	-113	2.49	34.95	20.81
22400	1037	29.43			7.51	1305	-115	2.58	44.26	20.90
23200	1039	29.43			7.57	1314	-117	2.54	40.84	20.82
24000	1042	29.43			7.69	1318	-117	2.62	50.94	20.81
24800	1044	29.43			7.91	1322	-117	2.87	76.28	20.73
25600	1046	29.43			8.67	1316	-43	3.31	122.6	20.62
26400	1048	29.43			8.16	1309	-107	3.31	157.3	20.59
27200	1051	29.43			8.19	1307	-100	3.19	167.0	20.64
28000	1054	29.43			8.19	1304	-93	3.10	223.2	20.78
28800	1056	29.43			8.22	1240	-87	3.29	335.9	20.59
29600	1057	29.43			8.18	1295	-81	3.11	361.8	20.46
30400	1059	29.43			8.20	1297	-78	3.28	373.4	20.35
31200	1101	29.43			8.11	1307	-70	3.48	530.7	20.38
32000	1104	29.43			7.95	1318	-61	3.36	3086	20.35
32800	1106	29.43			7.79	1327	-53	3.26	268.9	20.36
33600	1108	29.43			7.67	1335	-51	3.33	204.7	20.37
34400	1110	29.43			7.57	1340	-55	3.28	175.2	20.36
35200	1112	29.43			7.48	1343	-69	3.07	159.2	20.38
36000	1114	29.43			7.43	1345	-86	2.97	105.7	20.39
36800	1117	29.43			7.38	1347	-97	3.14	74.07	20.35
37600	1119	29.43			7.36	1348	-103	3.13	102.3	20.36
38400	1121	29.43			7.33	1352	-106	3.29	46.36	20.37
39200	1123	29.43			7.32	1358	-109	3.16	43.78	20.34
40000	1125	29.43			7.34	1364	-110	3.21	79.99	20.34
40800	1128	29.43			7.33	1368	-111	2.93	36.68	20.34
41600	1130	29.43			7.33	1371	-111	2.72	44.31	20.36
42400	1132	29.43			7.33	1377	-112	2.98	30.63	20.37
43200	1134	29.43			7.32	1379	-112	2.90	30.74	20.36
44000	1136	29.43			7.31	1378	-112	2.86	35.34	20.36
44800	1138	29.43			7.30	1382	-112	2.65	29.21	20.31
2 HOURS FLOW					10-17-14					

2.46

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M.Mansker, S.Voss

DATE: 10-9-14 WEATHER: Rain, cloudy / 55°

MONITORING WELL ID: ROST-3-MW SAMPLE ID: ROST-3-MW-ROX-100914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 41.21 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 37.81 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.85 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = 44.63 ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1032	41.21	clear	hydrocarbon	6.83	1115	-99	0.56	37.08	17.65
825	1035	41.31	clear		6.83	1119	-104	0.22	37.75	17.81
1650	1038	41.31	clear		6.83	1121	-107	0.11	23.85	17.89
2475	1041	41.31	clear		6.83	1123	-109	0.06	21.57	17.94
3300	1044	41.31	clear		6.83	1124	-111	0.04	19.91	17.97
4125	1047	41.31	clear		6.83	1125	-113	0.03	17.71	18.00
4950	1050	41.31	clear		6.83	1126	-114	0.02	14.70	18.02
5775	1053	41.31	clear		6.83	1127	-115	0.01	11.53	18.02
6600	1056	41.31	clear		6.83	1127	-116	0.01	10.37	18.00
7425	1059	41.31	clear		6.83	1127	-117	-0.00	7.25?	18.00

M. Mansker 10/9/14

Start Time: 1032 Elapsed Time (min): 27 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1059 Average Purge Rate (mL/min): 300 Date Calibrated: 10-9-14

SAMPLING DATA

Sample Date: 10-9-14 Sample Time: 1105 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 7425 mL

4.07

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mawhinney, S. Voss

DATE: 10-9-14 WEATHER: Rain, cloudy, 55°

MONITORING WELL ID: ROST-4-PZ(C) SAMPLE ID: ROST4PZC-ROX-100914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.20 ft
Depth to Water (btoc): 41.30 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 34.95 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 3.9 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = 43.20 ft btoc

Volume of Flow Through Cell : 851* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2553 mL
Ambient PID/FID Reading: ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (STABLE: over 3 readings; +/- 0.2)	Specific Cond. ~~(mS/cm)~~ (+/-3% mS/cm)	ORP (mV) (+/-20)	DO (mg/L) (+/-0.2 mg /L or +/-10%)	Turbidity (NTUs) (<10 or +/-10%)	Temp (°C) (+/- 0.2 °C)
0	1153	41.50	cloudy/sheen	-	6.71	2050	-106	0.31	41.94	18.87
800	1157	41.48	cloudy	-	6.70	2051	-111	0.08	35.52	19.19
1600	1202	41.50	cloudy	-	6.70	2037	-113	0.02	27.45	19.34
2400	1206	41.50	cloudy	-	6.71	2012	-114	0.01	20.50	19.36
3200	1210	41.50	cloudy	-	6.71	1978	-114	0.00	16.75	19.38
4000	1215	41.50	cloudy	-	6.72	1939	-113	0.01	13.24	19.38
4800	1219	41.50	cloudy	-	6.73	1874	-113	-0.01	9.465	19.25
5600	1223	41.50	clear	-	6.74	1804	-113	-0.02	8.259	18.98
6400	1227	41.50	clear	-	6.74	1751	-113	-0.02	6.574	18.94
7200	1232	41.56	clear	-	6.74	1712	-113	-0.02	6.174	18.96
8000	1236	41.56	clear	-	6.75	1685	-114	-0.02	6.004	19.06
8800	1240	41.56	clear	-	6.75	1662	-114	-0.01	5.572	19.09

Start Time: 1153 Elapsed Time (min): ~~1245~~ 47 Water Quality Meter ID & SN: TROLL 9500 -- R25206

Stop Time: 1240 Average Purge Rate (mL/min): 200 Date Calibrated: 10-9-14

SAMPLING DATA

Sample Date: 11-9-14 Sample Time: 1245 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 200 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials:

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 8800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mansker

DATE: 10/1/14 WEATHER: —

MONITORING WELL ID: ROST-5-PZ SAMPLE ID: —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 23.20 ft
Depth to Water (btoc): NE ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 13.20 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 0.0 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: —

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

10/16/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 –

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ Initials: —

COMMENTS: Not enough water to sample. Well is dry.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manskeer

DATE: 10/1/14 WEATHER: —

MONITORING WELL ID: ROST-10-PZ SAMPLE ID: —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 20.00 ft
Depth to Water (btoc): NE ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 0.0 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: —
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at: —
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: —

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

MK 10/16/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ Initials: —

COMMENTS: * Not enough water to sample. Well is dry.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manskeer

DATE: 10/1/14 WEATHER: —

MONITORING WELL ID: ROST-7-PZ SAMPLE ID: —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 30.00 ft
Depth to Water (btoc): 21.81 ft *
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 20.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 8.19 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: —

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

10/6/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☒ ~~Initials:~~ —

COMMENTS:

* Not enough water to sample

30.00ft - 21.81ft = 8.19ft

8.19ft × 0.041 gal/ft = 0.34 gal H_2O

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Manskar

DATE: 10/1/14 WEATHER: —

MONITORING WELL ID: ROST-21-PZ SAMPLE ID: —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 20.00 ft
Depth to Water (btoc): 19.38 ft *
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 0.62 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = — ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = — ft btoc

Volume of Flow Through Cell : — mL
Minimum Purge Volume = (3 x Flow Cell Volume): — mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: —

	STABLE: (over 3 readings)	+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

M.M 10/16/14

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 – —

Stop Time: — Average Purge Rate (mL/min): — Date Calibrated: —

SAMPLING DATA

Sample Date: — Sample Time: — Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ ~~Initials:~~ —

COMMENTS: * Not enough water to sample
20.00ft - 19.38ft = 0.62ft
0.62ft x 0.041 gal/ft = 0.03 gal H_2O

Total Purge Volume: — mL

2.20
124 gal

3785
469,340
936

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 4Q14 GW PROJECT NUMBER: 21562973.03004 FIELD PERSONNEL: M. Mauskar, S. Voss

DATE: 10-17-14 WEATHER: Sunny 65°

MONITORING WELL ID: T-12 SAMPLE ID: T12-Rox-101714

INITIAL DATA

Well Diameter): 6 in
Total Well Depth (btoc): 72.46 ft
Depth to Water (btoc): 44.40 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 46.46 ft
Screen Length): 26 ft

Water Column Height (do not include LNAPL or DNAPL): 28.06 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at:
Total Well Depth – 0.5 (Screen Length + DNAPL Column Height) = 59.46 ft btoc
If Depth to Top of Screen is < Depth to Water, Place Pump at:
Total Well Depth – (0.5 X Water Column Height + DNAPL Column Height) = — ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ____ ft btoc

Volume of Flow Through Cell : 990* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2971 mL
Ambient PID/FID Reading: — ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Specific Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
STABLE: (over 3 readings)					+/- 0.2	+/-3%	+/-20	+/-0.2 mg /L or +/-10%	<10 or +/-10%	+/- 0.2 °C
469,340	1443	44.40	clear	hydrocarbon	6.84	1121	-122	0.01	3.607	20.38
470,276	1445	44.40	↓	↓	6.83	1122	-124	-0.03	2.169	20.57
471,212	1448	44.40			6.82	1123	-125	-0.05	4.231	20.43

Start Time: 1443 Elapsed Time (min): 5 Water Quality Meter ID & SN: TROLL 9500 -- R26205

Stop Time: 1448 Average Purge Rate (mL/min): 400 Date Calibrated: 10-17-14

SAMPLING DATA

Sample Date: 10-17-14 Sample Time: 1450 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: —

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

* Flow through cell volume calculated by rugged reader used with Troll 9500

Total Purge Volume: 471,212 mL

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34126

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/10/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW1-ROX-100614	MW12-ROX-100614
TB-ROX-100614-HCL	TB-ROX-100614-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. VOC, VOC by 8011, and SVOC MS/MSD recoveries and VOC MS/MSD RPDs were outside evaluation criteria in sample MW1-ROX-100614. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for SVOC compound, 4-chloroaniline exceeded 30 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.9ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, although not requested on the COC, matrix spike/matrix spike duplicate MW-ROX-100614 MS/MSD was received by the laboratory for analysis. Upon receipt, matrix spike/matrix spike duplicate MW-ROX-100614 MS/MSD was correctly analyzed based on sample labels; no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1293-BS	VOCs	Acetone	**69**	70-130
MSV1293-BS	VOCs	Acrolein	**67**	70-130
MSV1293-BS	VOCs	Acrylonitrile	**67**	70-130
MSV1293-BS	VOCs	Chloroethane	**137**	70-130
MSV1293-BS	VOCs	Vinyl acetate	**68**	70-130
OP40108-BS	SVOCs	4-Nitrophenol	**25**	30-130
OP40108-BS	SVOCs	Phenol	**27**	30-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1293-BS was also associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-100614	VOCs	Acetone	**UJ**
MW1-ROX-100614	VOCs	Acrolein	**UJ**
MW1-ROX-100614	VOCs	Acrylonitrile	**UJ**
MW1-ROX-100614	VOCs	Vinyl acetate	**UJ**
MW12-ROX-100614	VOCs	Acetone	**UJ**
MW12-ROX-100614	VOCs	Acrolein	**UJ**
MW12-ROX-100614	VOCs	Acrylonitrile	**UJ**
MW12-ROX-100614	VOCs	Vinyl acetate	**UJ**
MW1-ROX-100614	SVOCs	4-Nitrophenol	**UJ**
MW1-ROX-100614	SVOCs	Phenol	**UJ**
MW12-ROX-100614	SVOCs	4-Nitrophenol	**UJ**
MW12-ROX-100614	SVOCs	Phenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW1-ROX-100614 was spiked and analyzed for VOCs, SVOCs, and PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW1-ROX-100614	VOCs	Acetone	**36/37**	2	70-130/30
MW1-ROX-100614	VOCs	Acrylonitrile	**63/65**	3	70-130/30

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW1-ROX-100614	VOCs	2-Butanone (MEK)	**64/61**	4	70-130/30
MW1-ROX-100614	VOCs	sec-Butylbenzene	**131**/122	7	70-130/30
MW1-ROX-100614	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30
MW1-ROX-100614	VOCs	1,4-Dioxane	**46/69**	**41**	70-130/30
MW1-ROX-100614	VOCs	Hexachlorobutadiene	**139/138**	1	70-130/30
MW1-ROX-100614	VOCs	2-Hexanone	**61/58**	5	70-130/30
MW1-ROX-100614	VOCs	p-Isopropyltoluene	**132**/126	4	70-130/30
MW1-ROX-100614	VOCs	1,1,1,2-Tetrachloroethane	**132**/126	4	70-130/30
MW1-ROX-100614	VOCs	Tetrachloroethene	**135**/129	4	70-130/30
MW1-ROX-100614	SVOCs	4-Nitrophenol	**27/27**	14	30-130/20
MW1-ROX-100614	SVOCs	Phenol	**29/29**	13	30-130/20
MW1-ROX-100614	VOCs by 8011	1,2-Dibromo-3-chloropropane	**146/163**	10	64-141/29

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

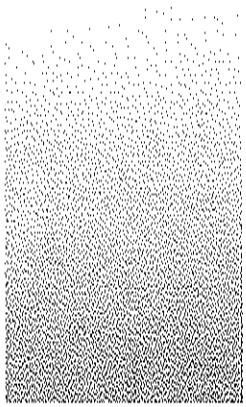
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

10/31/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34126

Sampling Date: 10/06/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **65**

Reviewed on 11/10/14

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34126

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC34126-1	10/06/14	10:50	MMSV	10/07/14	AQ	Ground Water	MW1-ROX-100614
MC34126-1D	10/06/14	10:50	MMSV	10/07/14	AQ	Water Dup/MSD	MW1-ROX-100614
MC34126-1S	10/06/14	10:50	MMSV	10/07/14	AQ	Water Matrix Spike	MW1-ROX-100614
MC34126-2	10/06/14	15:45	MMSV	10/07/14	AQ	Ground Water	MW12-ROX-100614
MC34126-3	10/06/14	00:00	MMSV	10/07/14	AQ	Trip Blank Water	TB-ROX-100614-HCL
MC34126-4	10/06/14	00:00	MMSV	10/07/14	AQ	Trip Blank Water	TB-ROX-100614-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC34126
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	Report Date	10/21/2014 10:51:23 AM

2 Sample(s) and 2 Trip Blank(s) were collected on 10/06/2014 and were received at Accutest on 10/07/2014 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of MC34126. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ Batch ID: MSV1293

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34126-1MS, MC34126-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1293-BS Recovery(s) for Acetone, Acrolein, Acrylonitrile, Chloroethane, Vinyl Acetate are outside control limits. Blank Spike meets program technical requirements.
- MC34126-1MS Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,4-Dioxane, 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrylonitrile, Hexachlorobutadiene, p-Isopropyltoluene, sec-Butylbenzene, Tetrachloroethene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC34126-1MSD Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrylonitrile, Hexachlorobutadiene, 1,4-Dioxane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,4-Dioxane are outside control limits for sample MC34126-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D

Matrix AQ Batch ID: OP40108

- 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.
- Sample(s) MC34126-1MS, MC34126-1MSD were used as the QC samples indicated.
- OP40108-BS/MS/MSD Recovery(s) for 4-Nitrophenol, Phenol are outside control limits. Blank Spike meets program technical requirements.
- Initial calibration verification MSF3361-ICV3361 for 4-Chloroaniline exceed 30% Difference. 4-Chloroaniline is within criteria in continuing calibration check standard MSF3364-CC3361.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ Batch ID: OP40109

- 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.
- Sample(s) MC34126-1MS, MC34126-1MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40111

- 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.
- Sample(s) MC34126-1MS, MC34126-1MSD were used as the QC samples indicated.
- OP40111-MS/MSD Recovery(s) for 1,2-Dibromo-3-chloropropane are outside control limits. Outside control limits due to possible matrix interference.

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(MC34126).

Summary of Hits

Job Number: MC34126
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/06/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34126-1	MW1-ROX-100614					
Methyl Tert Butyl Ether		0.82 J	1.0	0.51	ug/l	SW846 8260C
MC34126-2	MW12-ROX-100614					
No hits reported in this sample.						
MC34126-3	TB-ROX-100614-HCL					
No hits reported in this sample.						
MC34126-4	TB-ROX-100614-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V35622.D	1	10/16/14	AMY	n/a	n/a	MSV1293
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	UJ
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.82	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76767.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	uJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	uJ
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92172.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	0.53	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-100614		
Lab Sample ID:	MC34126-1	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59860.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	115%		36-173%
460-00-4	Bromofluorobenzene (S)	106%		36-173%

ND = Not detected MDL = Method Detection Limit
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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:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V35623.D	1	10/16/14	AMY	n/a	n/a	MSV1293
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	UJ
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	UJ
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	U
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76768.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	u5
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	u5
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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Report of Analysis

Client Sample ID:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		15-110%
4165-62-2	Phenol-d5	24%		15-110%
118-79-6	2,4,6-Tribromophenol	94%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	74%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92173.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	0.53	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-100614		
Lab Sample ID:	MC34126-2	Date Sampled:	10/06/14
Matrix:	AQ - Ground Water	Date Received:	10/07/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59861.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	154%		36-173%
460-00-4	Bromofluorobenzene (S)	138%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100614-HCL		
Lab Sample ID:	MC34126-3	Date Sampled:	10/06/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V35619.D	1	10/16/14	AMY	n/a	n/a	MSV1293
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-100614-HCL		
Lab Sample ID:	MC34126-3	Date Sampled:	10/06/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100614-HCL		
Lab Sample ID:	MC34126-3	Date Sampled:	10/06/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/07/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100614-ST		
Lab Sample ID:	MC34126-4	Date Sampled:	10/06/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/07/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59862.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	119%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

ND = Not detected MDL = Method Detection Limit
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

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE (_____)
☐ OTHER (Accutest Laboratories 496 Technology Cir W Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA RESEARCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #
INCIDENT # (ENV SERVICES): 9 7 7 1 6 4 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10-6-14
PAGE 1 of 1

Company: URS CORPORATION
Job Code:
Address: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110
Project Contact (phone) & PM Reporter: Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathwell
Telephone: 314-429-0100 Fax: 314-429-0462
Email: Elizabeth.Kunkel@URS.com, Wendy.Pennington@URS.com, Bob.Billman@URS.com, Lindsay.Rathwell@URS.com

Site Address: 000 South Conrail Ave, ROXANA
State: IL
Site Job # (Lab Bank) / Requisition # / Cost Center / Global ID:
Enfos: Roxana Quarterly GW I 21502073.03004
Consultant/Contractor: M. Manske, K. Voss
LAB USE ONLY: MC34124 MC34126

TURNAROUND TIME (BUSINESS DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED BY (Date/Time)
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please indicate "J" values on Reports
* Please provide sample receipt upon login.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REGULATORY/CONSULT RATE APPLIES
☐ FAX RESULTS
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS: MC34126

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW2-Rox-100614	10/6/14	1050	Water	2			2	2	6	X	X	X	X	0	
-2	MW12-Rox-100614		1345					2	2	6	X	X	X	X		
-3	TB-Rox-100614-HCl		0000							2	X					
-4	TB-Rox-100614-ST		0000						2	2		X				
																IN2, 18B

Relinquished by (Sampler): Melissa Manske
Received by: FED EX
Date: 10/6/14 Time: 1800

Relinquished by: FEDEX
Received by: [signature]
Date: 10-7-14 Time: 9:30

Relinquished by:
Received by:
Date: Time:

Temperature Upon Receipt: 19°C

5.1

MC34126: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34126 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/7/2014 9:30:00 AM **Delivery Method:**

Project: 900 SOUTH CENTRAL AVE **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 Preservation	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 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 rec'd 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 rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-1 we received volume for MS/MSD, but its not listed on the coc. 6 amber 950's, 6 HCL40ml vials, and 6 SOD THIO vials rec in total.

ACCUTEST LABORATORIES

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC34126

CSR: mattm **Response Date:** 10/7/2014

Response: See notes

5.1

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Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

MC34126: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34126

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34126-1 Collected: 06-OCT-14 10:50 By: MMSV Received: 07-OCT-14 By: AF						
MW1-ROX-100614						
MC34126-1	SW846 8011	08-OCT-14 14:08	NK	07-OCT-14	NE	V8011SL
MC34126-1	SW846 8270D	10-OCT-14 01:10	WK	07-OCT-14	MD	AB8270SL+
MC34126-1	SW846 8270D BY SIM	13-OCT-14 13:44	WK	07-OCT-14	MD	B8270SIMSL
MC34126-1	SW846 8260C	16-OCT-14 13:19	AMY			V8260SL+
MC34126-2 Collected: 06-OCT-14 15:45 By: MMSV Received: 07-OCT-14 By: AF						
MW12-ROX-100614						
MC34126-2	SW846 8011	08-OCT-14 14:25	NK	07-OCT-14	NE	V8011SL
MC34126-2	SW846 8270D	10-OCT-14 01:33	WK	07-OCT-14	MD	AB8270SL+
MC34126-2	SW846 8270D BY SIM	13-OCT-14 14:07	WK	07-OCT-14	MD	B8270SIMSL
MC34126-2	SW846 8260C	16-OCT-14 13:45	AMY			V8260SL+
MC34126-3 Collected: 06-OCT-14 00:00 By: MMSV Received: 07-OCT-14 By: AF						
TB-ROX-100614-HCL						
MC34126-3	SW846 8260C	16-OCT-14 12:00	AMY			V8260SL+
MC34126-4 Collected: 06-OCT-14 00:00 By: MMSV Received: 07-OCT-14 By: AF						
TB-ROX-100614-ST						
MC34126-4	SW846 8011	08-OCT-14 14:43	NK	07-OCT-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/07/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34126-1.1	Walk In Ref #22	Marc Tahtamoni	10/07/14 17:08	Retrieve from Storage
MC34126-1.4	VOC Ref #1	Amy Min Yang	10/16/14 10:52	Retrieve from Storage
MC34126-1.4	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-1.4	GCMSV	Amy Min Yang	10/17/14 15:39	Unload from Instrument
MC34126-1.4	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-1.6	Walk In Ref #22	Marc Tahtamoni	10/07/14 19:33	Retrieve from Storage
MC34126-1.7	Walk In Ref #22	Alireza Zeighami	10/07/14 15:48	Retrieve from Storage
MC34126-1.7	Alireza Zeighami		10/14/14 07:27	Depleted
MC34126-1.9	VOC Ref #1	Amy Min Yang	10/16/14 10:52	Retrieve from Storage
MC34126-1.9	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-1.9	GCMSV	Amy Min Yang	10/17/14 15:39	Unload from Instrument
MC34126-1.9	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-1.10	VOC Ref #1	Amy Min.Yang	10/16/14 10:52	Retrieve from Storage
MC34126-1.10	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-1.10	GCMSV	Amy Min Yang	10/17/14 15:39	Unload from Instrument
MC34126-1.10	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-1.11	Walk In Ref #22	Marc Tahtamoni	10/07/14 19:33	Retrieve from Storage
MC34126-1.13	Walk In Ref #22	Marc Tahtamoni	10/07/14 17:08	Retrieve from Storage
MC34126-1.15	VOC Ref #1	Amy Min Yang	10/16/14 10:52	Retrieve from Storage
MC34126-1.15	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-1.15	GCMSV	Amy Min.Yang	10/17/14 15:39	Unload from Instrument
MC34126-1.15	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-1.17	Walk In Ref #22	Marc Tahtamoni	10/07/14 19:33	Retrieve from Storage
MC34126-2.1	Walk In Ref #22	Alireza Zeighami	10/07/14 15:48	Retrieve from Storage
MC34126-2.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34126-2.3	VOC Ref #1	Amy Min Yang	10/16/14 10:52	Retrieve from Storage
MC34126-2.3	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-2.3	GCMSV	Amy Min Yang	10/17/14 15:39	Unload from Instrument
MC34126-2.3	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-2.5	Walk In Ref #22	Marc Tahtamoni	10/07/14 19:33	Retrieve from Storage
MC34126-3.1	VOC Ref #1	Amy Min Yang	10/16/14 10:52	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/07/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34126-3.1	Amy Min Yang	GCMSV	10/16/14 10:52	Load on Instrument
MC34126-3.1	GCMSV	Amy Min Yang	10/17/14 15:39	Unload from Instrument
MC34126-3.1	Amy Min Yang	VOC Ref #1	10/17/14 15:39	Return to Storage
MC34126-4.2	Walk In Ref #22	Marc Tahtamoni	10/07/14 19:33	Retrieve from Storage

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New England ACCUTEST LABORATORIES

GC/MS Volatiles

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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: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-MB	V35617.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-MB	V35617.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-MB	V35617.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	96%	70-130%
460-00-4	4-Bromofluorobenzene	92%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-BS	V35614.D	1	10/16/14 .	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	34.5	69* a	70-130
107-02-8	Acrolein	250	168	67* a	70-130
107-13-1	Acrylonitrile	50	33.5	67* a	70-130
71-43-2	Benzene	50	45.1	90	70-130
108-86-1	Bromobenzene	50	54.2	108	70-130
74-97-5	Bromochloromethane	50	45.7	91	70-130
75-27-4	Bromodichloromethane	50	53.4	107	70-130
75-25-2	Bromoform	50	51.8	104	70-130
74-83-9	Bromomethane	50	54.7	109	70-130
78-93-3	2-Butanone (MEK)	50	38.2	76	70-130
104-51-8	n-Butylbenzene	50	52.3	105	70-130
135-98-8	sec-Butylbenzene	50	55.6	111	70-130
98-06-6	tert-Butylbenzene	50	51.4	103	70-130
75-15-0	Carbon disulfide	50	46.1	92	70-130
56-23-5	Carbon tetrachloride	50	55.2	110	70-130
108-90-7	Chlorobenzene	50	56.9	114	70-130
75-00-3	Chloroethane	50	68.7	137* a	70-130
110-75-8	2-Chloroethyl vinyl ether	50	40.3	81	70-130
67-66-3	Chloroform	50	45.6	91	70-130
74-87-3	Chloromethane	50	48.5	97	70-130
95-49-8	o-Chlorotoluene	50	53.3	107	70-130
106-43-4	p-Chlorotoluene	50	52.8	106	70-130
124-48-1	Dibromochloromethane	50	56.2	112	70-130
95-50-1	1,2-Dichlorobenzene	50	51.9	104	70-130
541-73-1	1,3-Dichlorobenzene	50	53.2	106	70-130
106-46-7	1,4-Dichlorobenzene	50	51.4	103	70-130
75-71-8	Dichlorodifluoromethane	50	43.6	87	70-130
75-34-3	1,1-Dichloroethane	50	42.7	85	70-130
107-06-2	1,2-Dichloroethane	50	49.1	98	70-130
75-35-4	1,1-Dichloroethene	50	51.6	103	70-130
156-59-2	cis-1,2-Dichloroethene	50	44.8	90	70-130
156-60-5	trans-1,2-Dichloroethene	50	46.5	93	70-130
78-87-5	1,2-Dichloropropane	50	47.5	95	70-130
142-28-9	1,3-Dichloropropane	50	48.0	96	70-130
594-20-7	2,2-Dichloropropane	50	46.5	93	70-130
563-58-6	1,1-Dichloropropene	50	51.9	104	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-BS	V35614.D	1	10/16/14	AMY	n/a	n/a	MSV1293

6.2.1

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	55.6	111	70-130
10061-02-6	trans-1,3-Dichloropropene	50	55.9	112	70-130
123-91-1	1,4-Dioxane	125	114	91	70-130
97-63-2	Ethyl methacrylate	50	43.5	87	77-137
100-41-4	Ethylbenzene	50	58.1	116	70-130
87-68-3	Hexachlorobutadiene	50	61.6	123	70-130
591-78-6	2-Hexanone	50	41.1	82	70-130
98-82-8	Isopropylbenzene	50	55.1	110	70-130
99-87-6	p-Isopropyltoluene	50	57.8	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	41.6	83	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	37.3	75	70-130
74-95-3	Methylene bromide	50	50.1	100	70-130
75-09-2	Methylene chloride	50	43.4	87	70-130
91-20-3	Naphthalene	50	49.0	98	70-130
103-65-1	n-Propylbenzene	50	55.1	110	70-130
100-42-5	Styrene	50	56.6	113	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.1	114	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	41.9	84	70-130
127-18-4	Tetrachloroethene	50	60.5	121	70-130
108-88-3	Toluene	50	54.5	109	70-130
87-61-6	1,2,3-Trichlorobenzene	50	53.5	107	70-130
120-82-1	1,2,4-Trichlorobenzene	50	52.9	106	70-130
71-55-6	1,1,1-Trichloroethane	50	52.4	105	70-130
79-00-5	1,1,2-Trichloroethane	50	50.7	101	70-130
79-01-6	Trichloroethene	50	50.9	102	70-130
75-69-4	Trichlorofluoromethane	50	60.7	121	70-130
96-18-4	1,2,3-Trichloropropane	50	46.6	93	70-130
95-63-6	1,2,4-Trimethylbenzene	50	54.6	109	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.2	106	70-130
108-05-4	Vinyl Acetate	50	34.1	68* a	70-130
75-01-4	Vinyl chloride	50	50.2	100	70-130
	m,p-Xylene	100	116	116	70-130
95-47-6	o-Xylene	50	55.3	111	70-130
1330-20-7	Xylene (total)	150	171	114	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1293-BS	V35614.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	87%	70-130%
2037-26-5	Toluene-D8	106%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34126-1MS	V35627.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1MSD	V35628.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1	V35622.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	18.2	36* a	50	18.6	37* a	2	70-130/30
107-02-8	Acrolein	ND		250	216	86	250	236	94	9	70-130/30
107-13-1	Acrylonitrile	ND		50	31.6	63* a	50	32.6	65* a	3	70-130/30
71-43-2	Benzene	ND		50	50.0	100	50	48.7	97	3	70-130/30
108-86-1	Bromobenzene	ND		50	58.8	118	50	56.7	113	4	70-130/30
74-97-5	Bromochloromethane	ND		50	46.8	94	50	46.1	92	2	70-130/30
75-27-4	Bromodichloromethane	ND		50	57.3	115	50	54.1	108	6	70-130/30
75-25-2	Bromoform	ND		50	53.8	108	50	52.6	105	2	70-130/30
74-83-9	Bromomethane	ND		50	56.9	114	50	53.7	107	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	31.9	64* a	50	30.6	61* a	4	70-130/30
104-51-8	n-Butylbenzene	ND		50	59.4	119	50	58.2	116	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	65.4	131* a	50	60.9	122	7	70-130/30
98-06-6	tert-Butylbenzene	ND		50	63.1	126	50	57.9	116	9	70-130/30
75-15-0	Carbon disulfide	ND		50	40.8	82	50	41.7	83	2	70-130/30
56-23-5	Carbon tetrachloride	ND		50	57.1	114	50	57.9	116	1	70-130/30
108-90-7	Chlorobenzene	ND		50	62.2	124	50	60.2	120	3	70-130/30
75-00-3	Chloroethane	ND		50	64.8	130	50	59.3	119	9	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* a	50	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		50	50.0	100	50	48.6	97	3	70-130/30
74-87-3	Chloromethane	ND		50	50.8	102	50	50.0	100	2	70-130/30
95-49-8	o-Chlorotoluene	ND		50	60.0	120	50	56.6	113	6	70-130/30
106-43-4	p-Chlorotoluene	ND		50	58.4	117	50	55.9	112	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	60.2	120	50	57.0	114	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	56.5	113	50	55.8	112	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	58.4	117	50	57.4	115	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	56.8	114	50	55.5	111	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	46.0	92	50	44.7	89	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	44.6	89	50	45.6	91	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	51.6	103	50	48.6	97	6	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	51.1	102	50	52.7	105	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	47.5	95	50	47.3	95	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	45.0	90	50	47.8	96	6	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	51.5	103	50	49.7	99	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	51.8	104	50	49.8	100	4	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	48.2	96	50	49.3	99	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	59.3	119	50	57.1	114	4	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34126-1MS	V35627.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1MSD	V35628.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1	V35622.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	55.0	110	50	53.4	107	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	55.3	111	50	53.6	107	3	70-130/30
123-91-1	1,4-Dioxane	ND		125	56.9	46* a	125	86.3	69* a	41* b	70-130/30
97-63-2	Ethyl methacrylate	ND		50	44.3	89	50	42.8	86	3	72-139/30
100-41-4	Ethylbenzene	ND		50	64.5	129	50	62.8	126	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	69.4	139* a	50	68.9	138* a	1	70-130/30
591-78-6	2-Hexanone	ND		50	30.6	61* a	50	29.1	58* a	5	70-130/30
98-82-8	Isopropylbenzene	ND		50	63.8	128	50	59.6	119	7	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	65.9	132* a	50	63.2	126	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	0.82	J	50	42.2	85	50	43.9	86	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	37.0	74	50	35.1	70	5	70-130/30
74-95-3	Methylene bromide	ND		50	50.6	101	50	48.4	97	4	70-130/30
75-09-2	Methylene chloride	ND		50	42.2	84	50	44.0	88	4	70-130/30
91-20-3	Naphthalene	ND		50	48.5	97	50	51.4	103	6	70-130/30
103-65-1	n-Propylbenzene	ND		50	63.2	126	50	59.7	119	6	70-130/30
100-42-5	Styrene	ND		50	62.3	125	50	61.4	123	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	65.8	132* a	50	63.0	126	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	47.4	95	50	44.4	89	7	70-130/30
127-18-4	Tetrachloroethene	ND		50	67.4	135* a	50	64.5	129	4	70-130/30
108-88-3	Toluene	ND		50	57.6	115	50	55.6	111	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	50.6	101	50	55.7	111	10	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	54.8	110	50	56.1	112	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	55.6	111	50	56.2	112	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	52.1	104	50	49.8	100	5	70-130/30
79-01-6	Trichloroethene	ND		50	55.7	111	50	53.6	107	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	61.9	124	50	60.8	122	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	40.3	81	50	37.8	76	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	62.0	124	50	58.6	117	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	60.2	120	50	56.9	114	6	70-130/30
108-05-4	Vinyl Acetate	ND		50	35.9	72	50	35.3	71	2	70-130/30
75-01-4	Vinyl chloride	ND		50	52.6	105	50	52.8	106	0	70-130/30
	m,p-Xylene	ND		100	129	129	100	125	125	3	70-130/30
95-47-6	o-Xylene	ND		50	61.7	123	50	60.2	120	2	70-130/30
1330-20-7	Xylene (total)	ND		150	191	127	150	185	123	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34126-1MS	V35627.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1MSD	V35628.D	1	10/16/14	AMY	n/a	n/a	MSV1293
MC34126-1	V35622.D	1	10/16/14	AMY	n/a	n/a	MSV1293

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

MC34126-1, MC34126-2, MC34126-3

CAS No.	Surrogate Recoveries	MS	MSD	MC34126-1	Limits
1868-53-7	Dibromofluoromethane	88%	87%	95%	70-130%
2037-26-5	Toluene-D8	102%	101%	97%	70-130%
460-00-4	4-Bromofluorobenzene	94%	91%	91%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1

Volatile Internal Standard Area Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV1293-CC1262	Injection Date:	10/16/14
Lab File ID:	V35613.D	Injection Time:	09:20
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	854110	6.58	1337122	7.76	658368	11.09	851584	13.30	75329	3.55
Upper Limit [a]	1708220	7.08	2674244	8.26	1316736	11.59	1703168	13.80	150658	4.05
Lower Limit [b]	427055	6.08	668561	7.26	329184	10.59	425792	12.80	37665	3.05
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1293-BS	806861	6.57	1252990	7.76	648481	11.09	805361	13.30	76243	3.54
MSV1293-MB	721766	6.58	1170792	7.76	532741	11.09	649529	13.30	66150	3.54
ZZZZZZ	636572	6.58	969415	7.76	471655	11.09	598753	13.30	58698	3.54
MC34126-3	620861	6.58	1005591	7.76	486222	11.09	595091	13.30	59149	3.54
ZZZZZZ	635801	6.58	1051685	7.76	528042	11.09	619724	13.30	83715	3.54
ZZZZZZ	654491	6.58	1044003	7.76	483759	11.09	615543	13.30	56467	3.54
MC34126-1	636253	6.58	1046526	7.76	486909	11.09	597717	13.30	53394	3.54
MC34126-2	627926	6.58	1077050	7.76	519522	11.09	597728	13.30	51360	3.54
ZZZZZZ	660711	6.59	1107621	7.77	508454	11.09	608813	13.30	56420	3.55
ZZZZZZ	753272	6.59	1195573	7.77	553235	11.09	656551	13.30	59281	3.55
ZZZZZZ	692075	6.58	1048071	7.76	547867	11.09	689651	13.30	83129	3.54
MC34126-1MS	828603	6.58	1310161	7.77	637343	11.09	779152	13.30	69301	3.54
MC34126-1MSD	830011	6.59	1293118	7.77	627826	11.09	802372	13.30	71899	3.55
ZZZZZZ	745845	6.59	1152628	7.76	536111	11.09	661945	13.30	64122	3.55
ZZZZZZ	885777	6.59	1435518	7.77	719297	11.10	856674	13.30	229221[c]	3.55
ZZZZZZ	1036186	6.59	1627918	7.77	768189	11.09	967968	13.30	232305[c]	3.56
ZZZZZZ	1159832	6.59	1910679	7.77	860637	11.09	985644	13.30	124826	3.55
ZZZZZZ	1129443	6.59	1637591	7.76	704257	11.09	944206	13.30	112260	3.55
ZZZZZZ	1107108	6.59	1652561	7.76	696094	11.09	906672	13.30	95523	3.55
ZZZZZZ	1059111	6.59	1589892	7.76	717721	11.09	917031	13.30	88394	3.55
ZZZZZZ	1079909	6.59	1765438	7.77	752718	11.10	869265	13.30	73826	3.55

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) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34126-1	V35622.D	95	97	91
MC34126-2	V35623.D	96	101	94
MC34126-3	V35619.D	97	99	92
MC34126-1MS	V35627.D	88	102	94
MC34126-1MSD	V35628.D	87	101	91
MSV1293-BS	V35614.D	87	106	93
MSV1293-MB	V35617.D	94	96	92

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-MB	F76763.D	1	10/09/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-MB	F76763.D	1	10/09/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	44%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40109-MB	I92168.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34126-1, MC34126-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-BS	F76764.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.9	38	30-130
95-57-8	2-Chlorophenol	50	34.5	69	30-130
59-50-7	4-Chloro-3-methyl phenol	50	36.8	74	30-130
120-83-2	2,4-Dichlorophenol	50	43.9	88	30-130
105-67-9	2,4-Dimethylphenol	50	32.8	66	30-130
51-28-5	2,4-Dinitrophenol	50	50.5	101	30-130
534-52-1	4,6-Dinitro-o-cresol	50	52.2	104	30-130
95-48-7	2-Methylphenol	50	28.7	57	30-130
	3&4-Methylphenol	100	52.4	52	30-130
88-75-5	2-Nitrophenol	50	42.2	84	30-130
100-02-7	4-Nitrophenol	50	12.3	25* a	30-130
87-86-5	Pentachlorophenol	50	42.4	85	30-130
108-95-2	Phenol	50	13.3	27* a	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.0	82	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.0	88	30-130
62-53-3	Aniline	50	25.8	52	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.7	93	40-140
85-68-7	Butyl benzyl phthalate	50	40.6	81	40-140
100-51-6	Benzyl Alcohol	50	28.2	56	40-140
91-58-7	2-Chloronaphthalene	50	43.7	87	40-140
106-47-8	4-Chloroaniline	50	34.2	68	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	38.1	76	40-140
111-44-4	bis(2-Chloroethyl)ether	50	35.8	72	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	30.4	61	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.6	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	32.8	66	40-140
121-14-2	2,4-Dinitrotoluene	50	47.7	95	40-140
606-20-2	2,6-Dinitrotoluene	50	46.2	92	40-140
91-94-1	3,3'-Dichlorobenzidine	50	43.1	86	40-140
132-64-9	Dibenzofuran	50	41.3	83	40-140
84-74-2	Di-n-butyl phthalate	50	38.4	77	40-140
117-84-0	Di-n-octyl phthalate	50	34.5	69	40-140
84-66-2	Diethyl phthalate	50	41.5	83	40-140
131-11-3	Dimethyl phthalate	50	45.4	91	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	40.8	82	40-140
118-74-1	Hexachlorobenzene	50	46.6	93	40-140

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-BS	F76764.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	26.6	53	40-140
67-72-1	Hexachloroethane	50	23.5	47	40-140
78-59-1	Isophorone	50	34.1	68	40-140
88-74-4	2-Nitroaniline	50	41.5	83	40-140
99-09-2	3-Nitroaniline	50	37.9	76	40-140
100-01-6	4-Nitroaniline	50	38.7	77	40-140
98-95-3	Nitrobenzene	50	35.7	71	40-140
62-75-9	n-Nitrosodimethylamine	50	22.1	44	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	36.1	72	40-140
86-30-6	N-Nitrosodiphenylamine	50	38.9	78	40-140
110-86-1	Pyridine	50	21.4	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Tribromophenol	103%	15-110%
4165-60-0	Nitrobenzene-d5	73%	30-130%
321-60-8	2-Fluorobiphenyl	74%	30-130%
1718-51-0	Terphenyl-d14	87%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40109-BS	I92169.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34126-1, MC34126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.9	88	40-140
208-96-8	Acenaphthylene	50	39.5	79	40-140
120-12-7	Anthracene	50	42.5	85	40-140
56-55-3	Benzo(a)anthracene	50	48.2	96	40-140
50-32-8	Benzo(a)pyrene	50	45.9	92	40-140
205-99-2	Benzo(b)fluoranthene	50	45.6	91	40-140
191-24-2	Benzo(g,h,i)perylene	50	46.2	92	40-140
207-08-9	Benzo(k)fluoranthene	50	42.0	84	40-140
218-01-9	Chrysene	50	45.6	91	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.9	94	40-140
206-44-0	Fluoranthene	50	44.8	90	40-140
86-73-7	Fluorene	50	43.9	88	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	46.2	92	40-140
90-12-0	1-Methylnaphthalene	50	39.2	78	40-140
91-57-6	2-Methylnaphthalene	50	39.4	79	40-140
85-01-8	Phenanthrene	50	44.5	89	40-140
129-00-0	Pyrene	50	43.3	87	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	84%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-MS	F76765.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
OP40108-MSD	F76766.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
MC34126-1	F76767.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

7.3.1

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		62.5	25.9	41	54.3	22.6	42	14	30-130/20
95-57-8	2-Chlorophenol	ND		62.5	44.0	70	54.3	41.8	77	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		62.5	45.1	72	54.3	42.6	78	6	30-130/20
120-83-2	2,4-Dichlorophenol	ND		62.5	53.2	85	54.3	51.6	95	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		62.5	41.6	67	54.3	40.1	74	4	30-130/20
51-28-5	2,4-Dinitrophenol	ND		62.5	67.3	108	54.3	65.5	121	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		62.5	65.8	105	54.3	62.8	116	5	30-130/20
95-48-7	2-Methylphenol	ND		62.5	37.1	59	54.3	33.6	62	10	30-130/20
	3&4-Methylphenol	ND		125	67.5	54	109	62.0	57	8	30-130/20
88-75-5	2-Nitrophenol	ND		62.5	52.4	84	54.3	51.8	95	1	30-130/20
100-02-7	4-Nitrophenol	ND		62.5	17.1	27* a	54.3	14.9	27* a	14	30-130/20
87-86-5	Pentachlorophenol	ND		62.5	52.5	84	54.3	50.0	92	5	30-130/20
108-95-2	Phenol	ND		62.5	18.2	29* a	54.3	15.9	29* a	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		62.5	51.6	83	54.3	48.1	89	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		62.5	53.0	85	54.3	51.0	94	4	30-130/20
62-53-3	Aniline	ND		62.5	32.9	53	54.3	31.3	58	5	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		62.5	55.7	89	54.3	53.2	98	5	40-140/20
85-68-7	Butyl benzyl phthalate	ND		62.5	48.3	77	54.3	46.9	86	3	40-140/20
100-51-6	Benzyl Alcohol	ND		62.5	37.2	60	54.3	34.6	64	7	40-140/20
91-58-7	2-Chloronaphthalene	ND		62.5	54.9	88	54.3	52.3	96	5	40-140/20
106-47-8	4-Chloroaniline	ND		62.5	41.7	67	54.3	39.8	73	5	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		62.5	46.2	74	54.3	44.9	83	3	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		62.5	46.2	74	54.3	45.8	84	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		62.5	39.1	63	54.3	39.9	73	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		62.5	53.0	85	54.3	51.9	95	2	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		62.5	39.1	63	54.3	37.8	70	3	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		62.5	58.1	93	54.3	56.8	105	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		62.5	55.9	89	54.3	53.8	99	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		62.5	42.6	68	54.3	41.6	77	2	40-140/20
132-64-9	Dibenzofuran	ND		62.5	50.5	81	54.3	48.9	90	3	40-140/20
84-74-2	Di-n-butyl phthalate	ND		62.5	46.9	75	54.3	46.1	85	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		62.5	41.7	67	54.3	40.4	74	3	40-140/20
84-66-2	Diethyl phthalate	ND		62.5	50.7	81	54.3	48.8	90	4	40-140/20
131-11-3	Dimethyl phthalate	ND		62.5	54.1	87	54.3	51.8	95	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		62.5	48.5	78	54.3	47.4	87	2	40-140/20
118-74-1	Hexachlorobenzene	ND		62.5	55.6	89	54.3	53.7	99	3	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40108-MS	F76765.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
OP40108-MSD	F76766.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364
MC34126-1	F76767.D	1	10/10/14	WK	10/07/14	OP40108	MSF3364

The QC reported here applies to the following samples: Method: SW846 8270D

MC34126-1, MC34126-2

7.3.1

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CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		62.5	35.3	56	54.3	34.3	63	3	40-140/20
67-72-1	Hexachloroethane	ND		62.5	41.1	66	54.3	37.8	70	8	40-140/20
78-59-1	Isophorone	ND		62.5	40.8	65	54.3	40.1	74	2	40-140/20
88-74-4	2-Nitroaniline	ND		62.5	49.8	80	54.3	49.2	91	1	40-140/20
99-09-2	3-Nitroaniline	ND		62.5	46.4	74	54.3	44.3	82	5	40-140/20
100-01-6	4-Nitroaniline	ND		62.5	47.9	77	54.3	45.8	84	4	40-140/20
98-95-3	Nitrobenzene	ND		62.5	44.0	70	54.3	43.1	79	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		62.5	31.7	51	54.3	28.9	53	9	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		62.5	45.2	72	54.3	45.3	83	0	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		62.5	46.0	74	54.3	45.5	84	1	40-140/20
110-86-1	Pyridine	ND		62.5	28.4	45	54.3	24.6	45	14	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34126-1	Limits
367-12-4	2-Fluorophenol	43%	45%	38%	15-110%
4165-62-2	Phenol-d5	28%	29%	23%	15-110%
118-79-6	2,4,6-Tribromophenol	99%	110%	98%	15-110%
4165-60-0	Nitrobenzene-d5	70%	80%	64%	30-130%
321-60-8	2-Fluorobiphenyl	77%	86%	70%	30-130%
1718-51-0	Terphenyl-d14	83%	92%	91%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40109-MS	I92170.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435
OP40109-MSD	I92171.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435
MC34126-1	I92172.D	1	10/13/14	WK	10/07/14	OP40109	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34126-1, MC34126-2

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		62.5	54.3	87	54.3	51.8	95	5	40-140/20
208-96-8	Acenaphthylene	ND		62.5	49.2	79	54.3	46.7	86	5	40-140/20
120-12-7	Anthracene	ND		62.5	51.5	82	54.3	50.2	92	3	40-140/20
56-55-3	Benzo(a)anthracene	ND		62.5	59.6	95	54.3	57.0	105	4	40-140/20
50-32-8	Benzo(a)pyrene	ND		62.5	56.1	90	54.3	54.0	99	4	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		62.5	59.0	94	54.3	55.7	102	6	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		62.5	56.1	90	54.3	54.3	100	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		62.5	54.5	87	54.3	45.7	84	18	40-140/20
218-01-9	Chrysene	ND		62.5	56.4	90	54.3	53.6	99	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		62.5	57.0	91	54.3	54.7	101	4	40-140/20
206-44-0	Fluoranthene	ND		62.5	55.0	88	54.3	52.8	97	4	40-140/20
86-73-7	Fluorene	ND		62.5	54.0	86	54.3	51.4	95	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		62.5	55.9	89	54.3	53.8	99	4	40-140/20
90-12-0	1-Methylnaphthalene	ND		62.5	50.3	80	54.3	48.3	89	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		62.5	51.3	82	54.3	49.4	91	4	40-140/20
85-01-8	Phenanthrene	ND		62.5	53.7	86	54.3	51.5	95	4	40-140/20
129-00-0	Pyrene	ND		62.5	53.5	86	54.3	51.2	94	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34126-1	Limits
4165-60-0	Nitrobenzene-d5	82%	92%	76%	30-130%
321-60-8	2-Fluorobiphenyl	80%	87%	71%	30-130%
1718-51-0	Terphenyl-d14	85%	94%	88%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3364-CC3361	Injection Date:	10/09/14
Lab File ID:	F76743.D	Injection Time:	15:54
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	76329	4.38	243879	5.44	172197	6.97	339252	8.26	446691	10.90	411346	12.64
Upper Limit [a]	152658	4.88	487758	5.94	344394	7.47	678504	8.76	893382	11.40	822692	13.14
Lower Limit [b]	38165	3.88	121940	4.94	86099	6.47	169626	7.76	223346	10.40	205673	12.14
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	92470	4.38	316387	5.44	218821	6.97	439246	8.26	529772	10.90	487829	12.64
ZZZZZZ	79075	4.38	247049	5.44	180945	6.97	397389	8.26	458577	10.90	434677	12.64
ZZZZZZ	83850	4.38	271108	5.44	192332	6.97	389984	8.26	474272	10.90	426890	12.64
OP40071-MB	90496	4.38	298576	5.43	215725	6.97	451009	8.26	555030	10.90	525582	12.64
OP40071-BS	94814	4.38	309314	5.44	222188	6.97	446232	8.26	581392	10.90	546151	12.64
OP40071-MS	101647	4.38	318016	5.44	223217	6.97	440016	8.26	559077	10.90	519550	12.64
OP40071-MSD	98770	4.38	316990	5.44	221132	6.97	435815	8.26	544546	10.90	515597	12.64
MC34064-2	98227	4.38	319698	5.44	226361	6.97	453866	8.26	550968	10.90	496119	12.64
ZZZZZZ	96480	4.38	319314	5.44	228864	6.97	455778	8.26	558178	10.90	525903	12.64
ZZZZZZ	78538	4.38	262507	5.44	188659	6.97	397822	8.26	522590	10.90	508285	12.64
ZZZZZZ	79343	4.38	259393	5.44	190951	6.97	405928	8.26	532231	10.90	524042	12.64
ZZZZZZ	79965	4.38	258973	5.44	192671	6.97	410760	8.26	547436	10.90	533286	12.64
ZZZZZZ	86342	4.38	280099	5.44	203750	6.97	433526	8.26	543083	10.90	527299	12.64
ZZZZZZ	81169	4.38	267763	5.44	197553	6.97	427203	8.26	587354	10.89	570672	12.64
ZZZZZZ	73153	4.38	238093	5.44	174016	6.97	370810	8.26	492302	10.90	472758	12.64
OP40108-MB	71187	4.38	233117	5.44	172964	6.97	372746	8.26	499593	10.89	502758	12.64
OP40108-BS	78426	4.38	248775	5.44	180794	6.97	374203	8.26	498226	10.90	483062	12.64
OP40108-MS	69920	4.38	229577	5.44	167016	6.97	351470	8.26	483854	10.90	471928	12.64
OP40108-MSD	67308	4.38	222049	5.44	162056	6.97	340153	8.26	477575	10.90	472944	12.64
MC34126-1	82325	4.38	260278	5.43	187972	6.97	383638	8.26	476120	10.90	470732	12.64
MC34126-2	71582	4.38	227792	5.44	168409	6.97	352453	8.26	454973	10.89	451807	12.63

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3435-CC3427	Injection Date:	10/13/14
Lab File ID:	I92158.D	Injection Time:	08:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	322638	3.11	740819	4.13	420821	5.63	749255	6.89	597041	9.62	1218211	11.01
Upper Limit [a]	645276	3.61	1481638	4.63	841642	6.13	1498510	7.39	1194082	10.12	2436422	11.51
Lower Limit [b]	161319	2.61	370410	3.63	210411	5.13	374628	6.39	298521	9.12	609106	10.51
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40135-MB	310083	3.11	701895	4.13	409055	5.63	728477	6.89	574975	9.62	1189225	11.00
OP40135-BS	327008	3.11	753426	4.14	427053	5.63	761396	6.89	607407	9.63	1250544	11.01
OP40135-BSD	320537	3.11	743340	4.14	418873	5.63	744702	6.89	596635	9.63	1206899	11.01
ZZZZZZ	306875	3.11	697950	4.13	402831	5.63	709847	6.89	577570	9.62	1192890	11.00
ZZZZZZ	322148	3.11	722472	4.13	403362	5.63	710845	6.89	574544	9.62	1175578	11.01
ZZZZZZ	304162	3.11	693482	4.13	401471	5.63	699733	6.89	571724	9.62	1192333	11.00
ZZZZZZ	321443	3.11	725235	4.13	420988	5.63	727851	6.89	592570	9.62	1207639	11.00
ZZZZZZ	296778	3.11	674034	4.13	393169	5.63	694242	6.89	564890	9.61	1167148	11.00
ZZZZZZ	308122	3.11	702418	4.13	394628	5.63	695701	6.89	577370	9.61	1193124	11.00
OP40109-MB	356739	3.11	804504	4.13	471323	5.63	837133	6.89	684537	9.62	1410660	11.00
OP40109-BS	366193	3.11	847108	4.14	483947	5.63	862333	6.89	702519	9.63	1427769	11.01
OP40109-MS	373568	3.11	870346	4.14	487522	5.63	874968	6.89	695004	9.63	1414925	11.01
OP40109-MSD	345364	3.11	794131	4.14	448945	5.63	798608	6.90	641521	9.63	1300876	11.01
MC34126-1	357756	3.11	809069	4.13	470138	5.63	828107	6.89	677389	9.62	1397751	11.01
MC34126-2	331160	3.11	752405	4.13	435341	5.63	754747	6.89	629580	9.62	1289616	11.00
ZZZZZZ	354941	3.11	800970	4.13	462338	5.63	813256	6.89	663948	9.62	1316043	11.01
ZZZZZZ	333613	3.11	763393	4.13	441796	5.63	769445	6.89	637058	9.62	1287083	11.00
ZZZZZZ	336956	3.11	774741	4.13	439613	5.63	784138	6.89	671767	9.62	1303734	11.00
OP40117-MB	345397	3.11	787066	4.13	450130	5.63	790308	6.89	646728	9.62	1302774	11.00
OP40117-BS	342159	3.11	791205	4.14	447355	5.63	799252	6.89	640824	9.63	1272783	11.01
OP40117-MS	324350	3.11	754043	4.14	427967	5.63	765002	6.89	617888	9.63	1218301	11.01
OP40117-MSD	357832	3.11	836876	4.14	472748	5.63	839555	6.89	670922	9.63	1328757	11.01
MC33900-18	343314	3.11	775895	4.13	449021	5.63	779394	6.89	646491	9.62	1293578	11.00
ZZZZZZ	350335	3.11	794585	4.13	458875	5.63	810004	6.89	657881	9.62	1309904	11.00
ZZZZZZ	334727	3.11	756252	4.13	441980	5.63	763573	6.89	625805	9.62	1249581	11.00
ZZZZZZ	346274	3.11	782104	4.13	456055	5.63	793348	6.89	659235	9.62	1315986	11.00
ZZZZZZ	335813	3.11	760896	4.13	440068	5.63	766103	6.89	629202	9.62	1256793	11.00
ZZZZZZ	334054	3.11	755650	4.13	436368	5.63	765818	6.89	623348	9.62	1241247	11.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3435-CC3427	Injection Date:	10/13/14
Lab File ID:	I92158.D	Injection Time:	08:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34126-1	F76767.D	38	23	98	64	70	91
MC34126-2	F76768.D	40	24	94	71	74	91
OP40108-BS	F76764.D	43	27	103	73	74	87
OP40108-MB	F76763.D	44	29	98	73	70	89
OP40108-MS	F76765.D	43	28	99	70	77	83
OP40108-MSD	F76766.D	45	29	110	80	86	92

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1

Semivolatile Surrogate Recovery Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34126-1	I92172.D	76	71	88
MC34126-2	I92173.D	84	76	88
OP40109-BS	I92169.D	84	76	85
OP40109-MB	I92168.D	85	73	88
OP40109-MS	I92170.D	82	80	85
OP40109-MSD	I92171.D	92	87	94

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-MB	BB59853.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34126-1, MC34126-2, MC34126-4

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	131%	36-173%
460-00-4	Bromofluorobenzene (S)	119%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-BS	BB59854.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34126-1, MC34126-2, MC34126-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.075	106	60-140
106-93-4	1,2-Dibromoethane	0.071	0.087	123	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	113%	36-173%
460-00-4	Bromofluorobenzene (S)	100%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-MS	BB59858.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
OP40111-MSD	BB59859.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
MC34126-1	BB59860.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34126-1, MC34126-2, MC34126-4

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0683	0.10	146* [a]	0.0675	0.11	163* [a]	10	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0683	0.11	161	0.0675	0.11	163	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34126-1	Limits
460-00-4	Bromofluorobenzene (S)	109%	140%	115%	36-173%
460-00-4	Bromofluorobenzene (S)	98%	128%	106%	36-173%

(a) Outside control limits due to possible matrix interference.

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34126-1	BB59860.D	115	106
MC34126-2	BB59861.D	154	138
MC34126-4	BB59862.D	119	111
OP40111-BS	BB59854.D	113	100
OP40111-MB	BB59853.D	131	119
OP40111-MS	BB59858.D	109	98
OP40111-MSD	BB59859.D	140	128

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34126
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3331-ICC3331	Injection Date:	10/08/14
Lab File ID:	BB59849.D	Injection Time:	10:41
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.49	3.50

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40121-MB	BB59853A.D	10/08/14	12:02	3.49	3.50
OP40111-MB	BB59853.D	10/08/14	12:02	3.49	3.50
OP40111-BS	BB59854.D	10/08/14	12:20	3.49	3.50
OP40121-BS1	BB59855.D	10/08/14	12:38	3.49	3.50
OP40121-BS2	BB59856.D	10/08/14	12:56	3.49	3.50
OP40121-BS3	BB59857.D	10/08/14	13:14	3.49	3.50
OP40111-MS	BB59858.D	10/08/14	13:32	3.49	3.50
OP40111-MSD	BB59859.D	10/08/14	13:50	3.49	3.50
MC34126-1	BB59860.D	10/08/14	14:08	3.49	3.50
MC34126-2	BB59861.D	10/08/14	14:25	3.49	3.50
MC34126-4	BB59862.D	10/08/14	14:43	3.49	3.50

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34156

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/10/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW11-ROX-100714-EB	MW11-ROX-100714
MW10-ROX-100714	MW9-ROX-100714
MW16-ROX-100714	TB-ROX-100714-HCL
TB-ROX-100714-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs were detected in the method blank, and although not indicated in the laboratory case narrative, VOCs and SVOCs were detected in the equipment blank. VOC LCS recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration verification for 1,4-dioxane exceeded 40 percent difference (%D). Also, the initial calibration verification for 1,2,4-trichlorobenzene and 1,2,3-trichlorobenzene exceeded 30%D.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.9ºC and 0.5°C, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW11-ROX-100714-EB	VOCs	m,p-Xylene	0.94 µg/L
MW11-ROX-100714-EB	VOCs	o-Xylene	0.99 µg/L
MW11-ROX-100714-EB	VOCs	Xylene (total)	1.9 µg/L
MW11-ROX-100714-EB	SVOCs	Di-n-butyl phthalate	0.60 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
OP40116-MB	SVOCs	Di-n-butyl phthalate	0.75 µg/L
OP40116-MB	SVOCs	bis(2-Ethylhexyl)phthalate	0.85 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification; no qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSP2636-BS	VOCs	1,2,4-Trichlorobenzene	**140**	70-130
MSP2636-BS	VOCs	Vinyl acetate	**59**	70-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSP2636-BS was also associated with the trip blank and equipment blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW11-ROX-100714	VOCs	Vinyl acetate	**UJ**
MW10-ROX-100714	VOCs	Vinyl acetate	**UJ**
MW9-ROX-100714	VOCs	Vinyl acetate	**UJ**
MW16-ROX-100714	VOCs	Vinyl acetate	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

10/31/14

Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34156

Sampling Date: 10/07/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **87**

Reviewed on 11/10/14

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Shell Oil

Job No: MC34156

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34156-1	10/07/14	08:40	MMSV	10/08/14	AQ	Ground Water	MW11-ROX-100714 EB
MC34156-2	10/07/14	10:00	MMSV	10/08/14	AQ	Ground Water	MW11-ROX-100714
MC34156-3	10/07/14	11:35	MMSV	10/08/14	AQ	Ground Water	MW10-ROX-100714
MC34156-4	10/07/14	13:30	MMSV	10/08/14	AQ	Ground Water	MW9-ROX-100714
MC34156-5	10/07/14	15:15	MMSV	10/08/14	AQ	Ground Water	MW16-ROX-100714
MC34156-6	10/07/14	00:00	MMSV	10/08/14	AQ	Trip Blank Water	TB-ROX-100714-HCL
MC34156-7	10/07/14	00:00	MMSV	10/08/14	AQ	Trip Blank Water	TB-ROX-100714-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34156
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	10/22/2014 8:41:14 AM

5 Sample(s) and 2 Trip Blank(s) were collected on 10/07/2014 and were received at Accutest on 10/08/2014 properly preserved, at 0.5 Deg. C and intact. These Samples received an Accutest job number of MC34156. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ **Batch ID:** MSP2636

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34166-2MS, MC34166-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSP2636-BS Recovery(s) for Vinyl Acetate are outside control limits. Blank Spike meets program technical requirements.
- MC34166-2MS Recovery(s) for 1,2,3-Trichlorobenzene, 2-Butanone (MEK), Acetone, Bromomethane, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC34166-2MSD Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone, Vinyl Acetate, 1,4-Dioxane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 1,4-Dioxane, Bromomethane are outside control limits for sample MC34166-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Initial calibration verification MSP2634-ICV2633 for 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene exceed 30% Difference (response bias high). Associated samples are non-detect for these compounds.
- MSP2636-BS, MC34166-2MS, MC34166-2MSD for 1,2,4-Trichlorobenzene: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration check standard MSP2636-CC2633 for 1,4-dioxane exceed 40% Difference (response bias high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP40116

- 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.
- Sample(s) MC33900-17MS, MC33900-17MSD were used as the QC samples indicated.
- RPD(s) for MSD for 2,4-Dimethylphenol, Hexachloroethane are outside control limits for sample OP40116-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ **Batch ID:** OP40117

- 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.
- Sample(s) MC33900-18MS, MC33900-18MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40111

- 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.
- Sample(s) MC34126-1MS, MC34126-1MSD were used as the QC samples indicated.
- OP40111-MS/MSD Recovery(s) for 1,2-Dibromo-3-chloropropane are outside control limits. Outside control limits due to possible matrix interference.

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(MC34156).

Summary of Hits

Job Number: MC34156
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/07/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34156-1	MW11-ROX-100714 EB					
m,p-Xylene		0.94 J	1.0	0.93	ug/l	SW846 8260C
o-Xylene		0.99 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		1.9	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		0.60 J	6.1	0.21	ug/l	SW846 8270D
MC34156-2	MW11-ROX-100714					
No hits reported in this sample.						
MC34156-3	MW10-ROX-100714					
No hits reported in this sample.						
MC34156-4	MW9-ROX-100714					
No hits reported in this sample.						
MC34156-5	MW16-ROX-100714					
No hits reported in this sample.						
MC34156-6	TB-ROX-100714-HCL					
No hits reported in this sample.						
MC34156-7	TB-ROX-100714-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80580.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	0.94	1.0	0.93	ug/l	J
95-47-6	o-Xylene	0.99	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	1.9	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76849.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
Run #2							

	Initial Volume	Final Volume
Run #1	820 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	
95-57-8	2-Chlorophenol	ND	6.1	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	1.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.68	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.4	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.57	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.5	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.65	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.4	ug/l	
108-95-2	Phenol	ND	6.1	0.37	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.78	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.1	0.57	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.1	0.65	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.8	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.1	0.38	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.68	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.1	0.35	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.1	0.43	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.1	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.1	0.31	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.1	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.56	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.37	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.1	0.33	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.32	ug/l	
84-74-2	Di-n-butyl phthalate	0.60	6.1	0.21	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	6.1	0.34	ug/l	

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	6.1	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.1	0.41	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.41	ug/l	
118-74-1	Hexachlorobenzene	ND	6.1	0.35	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.6	ug/l	
67-72-1	Hexachloroethane	ND	6.1	0.37	ug/l	
78-59-1	Isophorone	ND	6.1	0.55	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.48	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.1	0.48	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.1	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.1	0.49	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.1	0.24	ug/l	
110-86-1	Pyridine	ND	12	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	39%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	78%		15-110%
4165-60-0	Nitrobenzene-d5	57%		30-130%
321-60-8	2-Fluorobiphenyl	58%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92182.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	820 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.084	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.060	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.061	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.035	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.061	0.039	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.033	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.047	ug/l	
218-01-9	Chrysene	ND	0.12	0.029	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.039	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.050	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.037	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.4	0.61	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.4	0.61	ug/l	
85-01-8	Phenanthrene	ND	0.061	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.047	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714 EB		
Lab Sample ID:	MC34156-1	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59867.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	77%		36-173%
460-00-4	Bromofluorobenzene (S)	66%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80582.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	U
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	87%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76850.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	ND	5.2	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.34	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.31	ug/l	
78-59-1	Isophorone	ND	5.2	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.41	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92183.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	ND	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	0.52	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	0.52	ug/l	
85-01-8	Phenanthrene	ND	0.052	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	82%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW11-ROX-100714		
Lab Sample ID:	MC34156-2	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59868.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	37.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	72%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80583.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76851.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
Run #2							

	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.95	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.7	0.35	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.54	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.61	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.64	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.7	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.35	ug/l	
78-59-1	Isophorone	ND	5.7	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92184.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.079	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.057	ug/l	
120-12-7	Anthracene	ND	0.11	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.047	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.3	0.57	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.3	0.57	ug/l	
85-01-8	Phenanthrene	ND	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW10-ROX-100714		
Lab Sample ID:	MC34156-3	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59869.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	81%		36-173%
460-00-4	Bromofluorobenzene (S)	69%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80584.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76852.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.55	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	5.9	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.9	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	90%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92185.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.4	0.59	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.4	0.59	ug/l	
85-01-8	Phenanthrene	ND	0.059	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	86%		30-130%

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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:	MW9-ROX-100714		
Lab Sample ID:	MC34156-4	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59870.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	72%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80585.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.5

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	U
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76853.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
Run #2							

	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	3.0	ug/l	
95-57-8	2-Chlorophenol	ND	6.0	0.37	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.98	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.67	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	3.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.56	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	ND	6.0	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.76	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	0.56	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	0.63	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	0.40	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	0.29	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.36	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	0.32	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.31	ug/l	
84-74-2	Di-n-butyl phthalate	ND	6.0	0.21	ug/l	
117-84-0	Di-n-octyl phthalate	ND	6.0	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	6.0	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.40	ug/l	
118-74-1	Hexachlorobenzene	ND	6.0	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	6.0	0.36	ug/l	
78-59-1	Isophorone	ND	6.0	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.6	ug/l	
98-95-3	Nitrobenzene	ND	6.0	0.47	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	0.48	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	62%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92186.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
Run #2							

	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.082	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.059	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.046	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.4	0.60	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.4	0.60	ug/l	
85-01-8	Phenanthrene	ND	0.060	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

ND = Not detected MDL = Method Detection Limit
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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:	MW16-ROX-100714		
Lab Sample ID:	MC34156-5	Date Sampled:	10/07/14
Matrix:	AQ - Ground Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59871.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	109%		36-173%
460-00-4	Bromofluorobenzene (S)	95%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100714-HCL		
Lab Sample ID:	MC34156-6	Date Sampled:	10/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80578.D	1	10/16/14	JB	n/a	n/a	MSP2636
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100714-HCL		
Lab Sample ID:	MC34156-6	Date Sampled:	10/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	TB-ROX-100714-HCL		
Lab Sample ID:	MC34156-6	Date Sampled:	10/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	86%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100714-ST		
Lab Sample ID:	MC34156-7	Date Sampled:	10/07/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/08/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59872.D	1	10/09/14	NK	10/08/14	OP40111	GBB3332
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		36-173%
460-00-4	Bromofluorobenzene (S)	85%		36-173%

ND = Not detected MDL = Method Detection Limit
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

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ KENCO ( )
☐ CALSCIENCE ( )
☑ OTHER (Accutest Labs, 4 Technology Cir W Marlborough, MA 01752 (508-481-6200))
☐ SPL (Lab Vendor #)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ PUTIVA RETAIL ☐ SHELL RETAIL
☐ PUTIVA SUSCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

INCIDENT # (ENV SERVICES): 0 7 2 1 6 8 4 0

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-7-14

PO #

SAP #: 0 4 0 0 0 1

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathnow

314-429-0100 | 314-429-0402

Elizabeth.kunkel@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com, lindsay.rathnow@urs.com

800 South Central Ave, ROXANA

Roxana Quarterly GW / 21882873.03004

M. Mansker, S. Voss

LAB USE ONLY: mc34156

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON SUNDAY

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE CONTRACT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PRIMER LEDD DISK

REQUESTED ANALYSIS

FIELD NOTES: TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW11-ROX-100714EB	10/7/14	0840	Water	2			2	2	6	X	X	X	X	0	
-2	MW11-ROX-100714	↓	1000	↓	2			2	2	6	X	X	X	X	↓	
-3	MW10-ROX-100714	↓	1135	↓	2			2	2	6	X	X	X	X	↓	
-4	MW09-ROX-100714	↓	1330	↓	2			2	2	6	X	X	X	X	↓	
-5	MW16-ROX-100714	↓	1515	↓	2			2	2	6	X	X	X	X	↓	
-6	TB-ROX-100714Hcl	↓	0000	↓	2					2	X				↓	
-7	TB-ROX-100714-ST	↓	0000	↓					2	2		X			↓	
																18A, 10 4,

10-7-14

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	10-7-14	
FEDX	[signature]	10-8-14	930

0.9
0.5 °C

5.1

5

MC34156: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34156 Client: URS Project: 900 SOUTH CENTRAL AVE

Date / Time Received: 10/8/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (0.5/0.5); #2: (0.9/0.9);

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	2

Quality Control Preservation	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 01752
www.accutest.com

5.1

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MC34156: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34156

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34156-1 Collected: 07-OCT-14 08:40 By: MMSV Received: 08-OCT-14 By: MW11-ROX-100714 EB						
MC34156-1	SW846 8011	09-OCT-14 09:30	NK	08-OCT-14	MT	V8011SL
MC34156-1	SW846 8270D BY SIM	13-OCT-14 17:35	WK	08-OCT-14	MD	B8270SIMSL
MC34156-1	SW846 8270D	14-OCT-14 14:14	WK	08-OCT-14	MD	AB8270SL+
MC34156-1	SW846 8260C	16-OCT-14 12:53	JB			V8260SL+
MC34156-2 Collected: 07-OCT-14 10:00 By: MMSV Received: 08-OCT-14 By: MW11-ROX-100714						
MC34156-2	SW846 8011	09-OCT-14 09:48	NK	08-OCT-14	MT	V8011SL
MC34156-2	SW846 8270D BY SIM	13-OCT-14 17:59	WK	08-OCT-14	MD	B8270SIMSL
MC34156-2	SW846 8270D	14-OCT-14 14:37	WK	08-OCT-14	MD	AB8270SL+
MC34156-2	SW846 8260C	16-OCT-14 13:52	JB			V8260SL+
MC34156-3 Collected: 07-OCT-14 11:35 By: MMSV Received: 08-OCT-14 By: MW10-ROX-100714						
MC34156-3	SW846 8011	09-OCT-14 10:06	NK	08-OCT-14	MT	V8011SL
MC34156-3	SW846 8270D BY SIM	13-OCT-14 18:22	WK	08-OCT-14	MD	B8270SIMSL
MC34156-3	SW846 8270D	14-OCT-14 15:00	WK	08-OCT-14	MD	AB8270SL+
MC34156-3	SW846 8260C	16-OCT-14 14:22	JB			V8260SL+
MC34156-4 Collected: 07-OCT-14 13:30 By: MMSV Received: 08-OCT-14 By: MW9-ROX-100714						
MC34156-4	SW846 8011	09-OCT-14 10:24	NK	08-OCT-14	MT	V8011SL
MC34156-4	SW846 8270D BY SIM	13-OCT-14 18:45	WK	08-OCT-14	MD	B8270SIMSL
MC34156-4	SW846 8270D	14-OCT-14 15:23	WK	08-OCT-14	MD	AB8270SL+
MC34156-4	SW846 8260C	16-OCT-14 14:51	JB			V8260SL+
MC34156-5 Collected: 07-OCT-14 15:15 By: MMSV Received: 08-OCT-14 By: MW16-ROX-100714						
MC34156-5	SW846 8011	09-OCT-14 10:43	NK	08-OCT-14	MT	V8011SL
MC34156-5	SW846 8270D BY SIM	13-OCT-14 19:08	WK	08-OCT-14	MD	B8270SIMSL
MC34156-5	SW846 8270D	14-OCT-14 15:46	WK	08-OCT-14	MD	AB8270SL+
MC34156-5	SW846 8260C	16-OCT-14 15:21	JB			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34156

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34156-6 Collected: 07-OCT-14 00:00 By: MMSV Received: 08-OCT-14 By: TB-ROX-100714-HCL						
MC34156-6	SW846 8260C	16-OCT-14 11:54	JB			V8260SL+
MC34156-7 Collected: 07-OCT-14 00:00 By: MMSV Received: 08-OCT-14 By: TB-ROX-100714-ST						
MC34156-7	SW846 8011	09-OCT-14 11:01	NK	08-OCT-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34156-1.2	Walk In Ref #22	Thomas Abruzzise	10/08/14 14:27	Retrieve from Storage
MC34156-1.2	Thomas Abruzzise		10/23/14 15:08	Depleted
MC34156-1.3	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage
MC34156-1.3	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-1.3	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-1.3	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-1.5	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage
MC34156-2.2	Walk In Ref #22	Thomas Abruzzise	10/08/14 14:27	Retrieve from Storage
MC34156-2.2	Thomas Abruzzise		10/23/14 15:08	Depleted
MC34156-2.4	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage
MC34156-2.4	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-2.4	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-2.4	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-2.5	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage
MC34156-3.1	Walk In Ref #22	Thomas Abruzzise	10/08/14 14:27	Retrieve from Storage
MC34156-3.1	Thomas Abruzzise		10/23/14 15:08	Depleted
MC34156-3.3	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage
MC34156-3.3	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-3.3	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-3.3	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-3.6	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage
MC34156-4.2	Walk In Ref #22	Thomas Abruzzise	10/08/14 14:27	Retrieve from Storage
MC34156-4.2	Thomas Abruzzise		10/23/14 15:08	Depleted
MC34156-4.3	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage
MC34156-4.3	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-4.3	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-4.3	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-4.5	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage
MC34156-5.2	Walk In Ref #22	Thomas Abruzzise	10/08/14 14:27	Retrieve from Storage
MC34156-5.2	Thomas Abruzzise		10/23/14 15:08	Depleted
MC34156-5.4	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/08/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34156-5.4	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-5.4	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-5.4	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-5.6	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage
MC34156-6.2	VOC Ref #1	Jaclyn Bergeron	10/16/14 11:20	Retrieve from Storage
MC34156-6.2	Jaclyn Bergeron	GCMSP	10/16/14 11:20	Load on Instrument
MC34156-6.2	GCMSP	Jaclyn Bergeron	10/17/14 12:04	Unload from Instrument
MC34156-6.2	Jaclyn Bergeron	VOC Ref #1	10/17/14 12:04	Return to Storage
MC34156-7.2	Walk In Ref #22	Marc Tahtamoni	10/08/14 16:10	Retrieve from Storage

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: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-MB	P80577.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-MB	P80577.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-MB	P80577.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	87%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-BS	P80574.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	53.4	107	70-130
107-02-8	Acrolein	250	228	91	70-130
107-13-1	Acrylonitrile	50	45.7	91	70-130
71-43-2	Benzene	50	48.6	97	70-130
108-86-1	Bromobenzene	50	48.8	98	70-130
74-97-5	Bromochloromethane	50	53.2	106	70-130
75-27-4	Bromodichloromethane	50	54.2	108	70-130
75-25-2	Bromoform	50	55.4	111	70-130
74-83-9	Bromomethane	50	44.0	88	70-130
78-93-3	2-Butanone (MEK)	50	41.6	83	70-130
104-51-8	n-Butylbenzene	50	47.1	94	70-130
135-98-8	sec-Butylbenzene	50	52.5	105	70-130
98-06-6	tert-Butylbenzene	50	47.3	95	70-130
75-15-0	Carbon disulfide	50	44.3	89	70-130
56-23-5	Carbon tetrachloride	50	54.6	109	70-130
108-90-7	Chlorobenzene	50	51.7	103	70-130
75-00-3	Chloroethane	50	51.4	103	70-130
110-75-8	2-Chloroethyl vinyl ether	50	55.3	111	70-130
67-66-3	Chloroform	50	47.7	95	70-130
74-87-3	Chloromethane	50	44.2	88	70-130
95-49-8	o-Chlorotoluene	50	46.3	93	70-130
106-43-4	p-Chlorotoluene	50	46.0	92	70-130
124-48-1	Dibromochloromethane	50	54.4	109	70-130
95-50-1	1,2-Dichlorobenzene	50	52.0	104	70-130
541-73-1	1,3-Dichlorobenzene	50	52.6	105	70-130
106-46-7	1,4-Dichlorobenzene	50	51.6	103	70-130
75-71-8	Dichlorodifluoromethane	50	40.9	82	70-130
75-34-3	1,1-Dichloroethane	50	51.1	102	70-130
107-06-2	1,2-Dichloroethane	50	50.0	100	70-130
75-35-4	1,1-Dichloroethene	50	48.4	97	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.4	95	70-130
156-60-5	trans-1,2-Dichloroethene	50	47.1	94	70-130
78-87-5	1,2-Dichloropropane	50	50.4	101	70-130
142-28-9	1,3-Dichloropropane	50	51.5	103	70-130
594-20-7	2,2-Dichloropropane	50	47.5	95	70-130
563-58-6	1,1-Dichloropropene	50	53.3	107	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-BS	P80574.D	1	10/16/14	JB	n/a	n/a	MSP2636

6.2.1

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.8	94	70-130
10061-02-6	trans-1,3-Dichloropropene	50	53.4	107	70-130
123-91-1	1,4-Dioxane	125	146	117	70-130
97-63-2	Ethyl methacrylate	50	47.0	94	77-137
100-41-4	Ethylbenzene	50	51.1	102	70-130
87-68-3	Hexachlorobutadiene	50	63.1	126	70-130
591-78-6	2-Hexanone	50	51.8	104	70-130
98-82-8	Isopropylbenzene	50	47.8	96	70-130
99-87-6	p-Isopropyltoluene	50	52.2	104	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.4	89	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.8	96	70-130
74-95-3	Methylene bromide	50	50.4	101	70-130
75-09-2	Methylene chloride	50	44.4	89	70-130
91-20-3	Naphthalene	50	58.1	116	70-130
103-65-1	n-Propylbenzene	50	49.9	100	70-130
100-42-5	Styrene	50	53.2	106	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	54.2	108	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	47.4	95	70-130
127-18-4	Tetrachloroethene	50	58.9	118	70-130
108-88-3	Toluene	50	49.1	98	70-130
87-61-6	1,2,3-Trichlorobenzene	50	64.7	129	70-130
120-82-1	1,2,4-Trichlorobenzene	50	70.1	140* a	70-130
71-55-6	1,1,1-Trichloroethane	50	52.3	105	70-130
79-00-5	1,1,2-Trichloroethane	50	53.0	106	70-130
79-01-6	Trichloroethene	50	50.8	102	70-130
75-69-4	Trichlorofluoromethane	50	42.3	85	70-130
96-18-4	1,2,3-Trichloropropane	50	47.4	95	70-130
95-63-6	1,2,4-Trimethylbenzene	50	49.3	99	70-130
108-67-8	1,3,5-Trimethylbenzene	50	48.2	96	70-130
108-05-4	Vinyl Acetate	50	29.6	59* b	70-130
75-01-4	Vinyl chloride	50	42.9	86	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	50.9	102	70-130
1330-20-7	Xylene (total)	150	153	102	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2636-BS	P80574.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	78%	70-130%

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

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34166-2MS	P80595.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2MSD	P80596.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2	P80581.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

6.3.1

CAS No.	Compound	MC34166-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	20.5	41* [a]	50	19.2	38* [a]	7	70-130/30
107-02-8	Acrolein	ND		250	215	86	250	202	81	6	70-130/30
107-13-1	Acrylonitrile	ND		50	46.2	92	50	39.0	78	17	70-130/30
71-43-2	Benzene	36.1		50	92.7	113	50	87.2	102	6	70-130/30
108-86-1	Bromobenzene	ND		50	50.1	100	50	48.3	97	4	70-130/30
74-97-5	Bromochloromethane	ND		50	57.1	114	50	53.9	108	6	70-130/30
75-27-4	Bromodichloromethane	ND		50	58.0	116	50	55.8	112	4	70-130/30
75-25-2	Bromoform	ND		50	60.3	121	50	56.6	113	6	70-130/30
74-83-9	Bromomethane	ND		50	33.6	67* [a]	50	49.4	99	38* [b]	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	32.9	66* [a]	50	28.6	57* [a]	14	70-130/30
104-51-8	n-Butylbenzene	ND		50	47.1	94	50	46.0	92	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	54.0	108	50	51.8	104	4	70-130/30
98-06-6	tert-Butylbenzene	ND		50	48.5	97	50	46.6	93	4	70-130/30
75-15-0	Carbon disulfide	ND		50	46.4	93	50	45.2	90	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	59.1	118	50	58.0	116	2	70-130/30
108-90-7	Chlorobenzene	ND		50	54.2	108	50	51.5	103	5	70-130/30
75-00-3	Chloroethane	ND		50	55.3	111	50	53.5	107	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	52.9	106	50	53.6	107	1	70-130/30
67-66-3	Chloroform	ND		50	50.5	101	50	48.2	96	5	70-130/30
74-87-3	Chloromethane	ND		50	43.5	87	50	48.2	96	10	70-130/30
95-49-8	o-Chlorotoluene	ND		50	47.4	95	50	45.8	92	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50	47.5	95	50	45.8	92	4	70-130/30
124-48-1	Dibromochloromethane	ND		50	59.0	118	50	55.6	111	6	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	52.9	106	50	50.6	101	4	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	53.9	108	50	51.6	103	4	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	53.1	106	50	50.9	102	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	44.7	89	50	43.9	88	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	53.5	107	50	51.4	103	4	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	51.4	103	50	48.7	97	5	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	51.2	102	50	48.7	97	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	49.2	98	50	47.2	94	4	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	50.5	101	50	47.4	95	6	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	53.0	106	50	51.1	102	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	52.9	106	50	49.8	100	6	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	62.1	124	50	59.1	118	5	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	56.2	112	50	53.8	108	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34166-2MS	P80595.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2MSD	P80596.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2	P80581.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

6.3.1

CAS No.	Compound	MC34166-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	49.8	100	50	47.0	94	6	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	56.0	112	50	52.4	105	7	70-130/30
123-91-1	1,4-Dioxane	ND		125	126	101	125	286	229* a	78* b	70-130/30
97-63-2	Ethyl methacrylate	ND		50	48.2	96	50	44.9	90	7	72-139/30
100-41-4	Ethylbenzene	ND		50	54.2	108	50	50.5	101	7	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	62.5	125	50	59.4	119	5	70-130/30
591-78-6	2-Hexanone	ND		50	36.9	74	50	33.5	67* a	10	70-130/30
98-82-8	Isopropylbenzene	ND		50	49.8	100	50	47.9	96	4	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	54.2	108	50	52.1	104	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	15.6		50	61.2	91	50	56.9	83	7	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	46.6	93	50	41.8	84	11	70-130/30
74-95-3	Methylene bromide	ND		50	52.2	104	50	49.0	98	6	70-130/30
75-09-2	Methylene chloride	ND		50	46.5	93	50	44.7	89	4	70-130/30
91-20-3	Naphthalene	ND		50	51.1	102	50	48.6	97	5	70-130/30
103-65-1	n-Propylbenzene	ND		50	51.4	103	50	49.2	98	4	70-130/30
100-42-5	Styrene	ND		50	54.2	108	50	51.4	103	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	58.8	118	50	54.8	110	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	46.4	93	50	42.9	86	8	70-130/30
127-18-4	Tetrachloroethene	ND		50	61.5	123	50	58.6	117	5	70-130/30
108-88-3	Toluene	ND		50	52.2	104	50	49.4	99	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	65.7	131* a	50	59.9	120	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	70.9	142* c	50	67.0	134* c	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	56.7	113	50	55.0	110	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	54.7	109	50	50.8	102	7	70-130/30
79-01-6	Trichloroethene	ND		50	53.9	108	50	51.4	103	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	44.4	89	50	43.2	86	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	46.4	93	50	42.4	85	9	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.0	104	50	50.0	100	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	50.1	100	50	48.1	96	4	70-130/30
108-05-4	Vinyl Acetate	ND		50	30.2	60* a	50	28.6	57* a	5	70-130/30
75-01-4	Vinyl chloride	ND		50	43.5	87	50	42.8	86	2	70-130/30
	m,p-Xylene	ND		100	108	108	100	102	102	6	70-130/30
95-47-6	o-Xylene	ND		50	53.8	108	50	51.0	102	5	70-130/30
1330-20-7	Xylene (total)	ND		150	162	108	150	153	102	6	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34166-2MS	P80595.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2MSD	P80596.D	1	10/16/14	JB	n/a	n/a	MSP2636
MC34166-2	P80581.D	1	10/16/14	JB	n/a	n/a	MSP2636

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

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-6

CAS No.	Surrogate Recoveries	MS	MSD	MC34166-2	Limits
1868-53-7	Dibromofluoromethane	94%	95%	94%	70-130%
2037-26-5	Toluene-D8	101%	101%	102%	70-130%
460-00-4	4-Bromofluorobenzene	76%	77%	87%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits. Associated samples are non-detect for this compound.

6.3.1

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSP2636-CC2633	Injection Date:	10/16/14
Lab File ID:	P80573.D	Injection Time:	09:26
Instrument ID:	GCMSP	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	868989	8.48	1067551	9.32	515624	12.52	541408	15.08	188613	6.16
Upper Limit [a]	1737978	8.98	2135102	9.82	1031248	13.02	1082816	15.58	377226	6.66
Lower Limit [b]	434495	7.98	533776	8.82	257812	12.02	270704	14.58	94307	5.66
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP2636-BS	897326	8.48	1104037	9.32	536666	12.53	545996	15.08	215120	6.16
MSP2636-MB	813476	8.48	998556	9.33	490316	12.52	449191	15.08	182612	6.19
MC34156-6	818499	8.48	996228	9.33	489184	12.53	453286	15.08	203756	6.18
ZZZZZZ	806569	8.48	992871	9.33	486388	12.53	438818	15.08	217424	6.19
MC34156-1	713983	8.48	886920	9.33	440894	12.53	396564	15.08	122715	6.20
MC34166-2	767052	8.48	952536	9.33	460839	12.53	423127	15.08	150172	6.19
MC34156-2	657094	8.48	814284	9.33	401506	12.53	356973	15.08	146943	6.20
MC34156-3	803829	8.48	989275	9.33	482782	12.52	436639	15.08	183660	6.19
MC34156-4	734474	8.48	898952	9.33	448060	12.53	393276	15.09	173152	6.20
MC34156-5	776595	8.48	957784	9.33	471268	12.53	413599	15.08	169963	6.19
ZZZZZZ	784496	8.48	970441	9.33	473617	12.53	417156	15.08	177161	6.19
ZZZZZZ	758116	8.48	930624	9.33	462652	12.53	399526	15.09	158340	6.19
ZZZZZZ	762656	8.48	945613	9.33	463611	12.52	419049	15.08	142287	6.19
ZZZZZZ	813164	8.48	993219	9.32	481111	12.52	458312	15.08	175715	6.18
ZZZZZZ	846445	8.48	1034163	9.32	481068	12.53	548519	15.08	190106	6.17
ZZZZZZ	846027	8.48	1041483	9.32	493604	12.53	494761	15.08	167250	6.19
MC34166-2MS	875545	8.48	1070992	9.32	524487	12.53	540381	15.08	158404	6.16
MC34166-2MSD	896404	8.48	1105657	9.32	540459	12.52	549642	15.08	140664	6.16

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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34156-1	P80580.D	94	102	87
MC34156-2	P80582.D	93	102	87
MC34156-3	P80583.D	93	103	88
MC34156-4	P80584.D	94	104	88
MC34156-5	P80585.D	92	102	89
MC34156-6	P80578.D	92	104	86
MC34166-2MS	P80595.D	94	101	76
MC34166-2MSD	P80596.D	95	101	77
MSP2636-BS	P80574.D	94	100	78
MSP2636-MB	P80577.D	93	102	87

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-MB	F76844.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.75	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.85	2.0	0.33	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-MB	F76844.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

7.1.1

7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	87%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40117-MB	I92177.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	74%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-BS	F76845.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	19.1	38	30-130
95-57-8	2-Chlorophenol	50	38.4	77	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.9	80	30-130
120-83-2	2,4-Dichlorophenol	50	40.2	80	30-130
105-67-9	2,4-Dimethylphenol	50	29.3	59	30-130
51-28-5	2,4-Dinitrophenol	50	49.6	99	30-130
534-52-1	4,6-Dinitro-o-cresol	50	51.3	103	30-130
95-48-7	2-Methylphenol	50	33.9	68	30-130
	3&4-Methylphenol	100	65.8	66	30-130
88-75-5	2-Nitrophenol	50	41.9	84	30-130
100-02-7	4-Nitrophenol	50	16.2	32	30-130
87-86-5	Pentachlorophenol	50	41.1	82	30-130
108-95-2	Phenol	50	16.5	33	30-130
95-95-4	2,4,5-Trichlorophenol	50	38.2	76	30-130
88-06-2	2,4,6-Trichlorophenol	50	39.1	78	30-130
62-53-3	Aniline	50	28.6	57	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.4	85	40-140
85-68-7	Butyl benzyl phthalate	50	48.7	97	40-140
100-51-6	Benzyl Alcohol	50	35.6	71	40-140
91-58-7	2-Chloronaphthalene	50	41.3	83	40-140
106-47-8	4-Chloroaniline	50	33.8	68	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	37.6	75	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.1	80	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	45.5	91	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	38.6	77	40-140
122-66-7	1,2-Diphenylhydrazine	50	37.0	74	40-140
121-14-2	2,4-Dinitrotoluene	50	48.5	97	40-140
606-20-2	2,6-Dinitrotoluene	50	46.8	94	40-140
91-94-1	3,3'-Dichlorobenzidine	50	53.8	108	40-140
132-64-9	Dibenzofuran	50	38.6	77	40-140
84-74-2	Di-n-butyl phthalate	50	45.2	90	40-140
117-84-0	Di-n-octyl phthalate	50	42.6	85	40-140
84-66-2	Diethyl phthalate	50	42.0	84	40-140
131-11-3	Dimethyl phthalate	50	43.3	87	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.2	98	40-140
118-74-1	Hexachlorobenzene	50	42.4	85	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-BS	F76845.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	21.2	42	40-140
67-72-1	Hexachloroethane	50	28.3	57	40-140
78-59-1	Isophorone	50	35.1	70	40-140
88-74-4	2-Nitroaniline	50	44.3	89	40-140
99-09-2	3-Nitroaniline	50	41.0	82	40-140
100-01-6	4-Nitroaniline	50	42.5	85	40-140
98-95-3	Nitrobenzene	50	36.2	72	40-140
62-75-9	n-Nitrosodimethylamine	50	28.4	57	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.3	83	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.5	81	40-140
110-86-1	Pyridine	50	24.7	49	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	15-110%
4165-60-0	Nitrobenzene-d5	74%	30-130%
321-60-8	2-Fluorobiphenyl	72%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40117-BS	I92178.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.0	86	40-140
208-96-8	Acenaphthylene	50	38.5	77	40-140
120-12-7	Anthracene	50	42.6	85	40-140
56-55-3	Benzo(a)anthracene	50	49.2	98	40-140
50-32-8	Benzo(a)pyrene	50	47.8	96	40-140
205-99-2	Benzo(b)fluoranthene	50	51.5	103	40-140
191-24-2	Benzo(g,h,i)perylene	50	47.6	95	40-140
207-08-9	Benzo(k)fluoranthene	50	45.2	90	40-140
218-01-9	Chrysene	50	46.4	93	40-140
53-70-3	Dibenzo(a,h)anthracene	50	48.4	97	40-140
206-44-0	Fluoranthene	50	46.1	92	40-140
86-73-7	Fluorene	50	43.0	86	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	47.4	95	40-140
90-12-0	1-Methylnaphthalene	50	38.0	76	40-140
91-57-6	2-Methylnaphthalene	50	38.5	77	40-140
85-01-8	Phenanthrene	50	44.3	89	40-140
129-00-0	Pyrene	50	44.5	89	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	84%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-MS	F76846.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
OP40116-MSD	F76847.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
MC33900-17	F76848.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

CAS No.	Compound	MC33900-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	19.2	38	50	18.4	37	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	37.6	75	50	37.5	75	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	38.8	78	50	38.2	76	2	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	40.7	81	50	39.2	78	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	29.4	59	50	21.0	42	33* a	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	49.5	99	50	51.9	104	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	50.4	101	50	52.0	104	3	30-130/20
95-48-7	2-Methylphenol	ND		50	33.2	66	50	32.3	65	3	30-130/20
	3&4-Methylphenol	ND		100	62.8	63	100	60.9	61	3	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.8	86	50	41.0	82	4	30-130/20
100-02-7	4-Nitrophenol	ND		50	15.3	31	50	16.1	32	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	40.5	81	50	40.4	81	0	30-130/20
108-95-2	Phenol	ND		50	16.4	33	50	15.7	31	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	37.7	75	50	37.4	75	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	38.0	76	50	39.1	78	3	30-130/20
62-53-3	Aniline	ND		50	28.1	56	50	26.5	53	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	44.4	89	50	42.9	86	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	49.6	99	50	47.6	95	4	40-140/20
100-51-6	Benzyl Alcohol	ND		50	33.7	67	50	33.7	67	0	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	41.7	83	50	42.0	84	1	40-140/20
106-47-8	4-Chloroaniline	ND		50	34.8	70	50	33.2	66	5	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	38.9	78	50	36.6	73	6	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	40.1	80	50	39.2	78	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	45.7	91	50	46.0	92	1	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	39.3	79	50	39.5	79	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	37.9	76	50	37.1	74	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	50.0	100	50	48.2	96	4	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	47.2	94	50	46.6	93	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	58.8	118	50	57.4	115	2	40-140/20
132-64-9	Dibenzofuran	ND		50	38.9	78	50	38.5	77	1	40-140/20
84-74-2	Di-n-butyl phthalate	0.68	J	50	46.1	91	50	45.0	89	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	42.7	85	50	42.5	85	0	40-140/20
84-66-2	Diethyl phthalate	ND		50	42.9	86	50	42.4	85	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	43.6	87	50	43.0	86	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	50.3	101	50	49.4	99	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	42.8	86	50	42.2	84	1	40-140/20

* = Outside of Control Limits.

7.3.1

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40116-MS	F76846.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
OP40116-MSD	F76847.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367
MC33900-17	F76848.D	1	10/14/14	WK	10/08/14	OP40116	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

7.3.1

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CAS No.	Compound	MC33900-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	21.0	42	50	24.0	48	13	40-140/20
67-72-1	Hexachloroethane	ND		50	28.0	56	50	35.0	70	22* [a]	40-140/20
78-59-1	Isophorone	ND		50	35.6	71	50	34.3	69	4	40-140/20
88-74-4	2-Nitroaniline	ND		50	43.9	88	50	42.9	86	2	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.3	81	50	40.5	81	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.1	86	50	42.3	85	2	40-140/20
98-95-3	Nitrobenzene	ND		50	37.8	76	50	36.5	73	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	27.3	55	50	27.4	55	0	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	41.1	82	50	40.0	80	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	41.5	83	50	40.7	81	2	40-140/20
110-86-1	Pyridine	ND		50	24.9	50	50	24.1	48	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC33900-17	Limits
367-12-4	2-Fluorophenol	49%	48%	49%	15-110%
4165-62-2	Phenol-d5	33%	32%	33%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	97%	96%	15-110%
4165-60-0	Nitrobenzene-d5	75%	72%	75%	30-130%
321-60-8	2-Fluorobiphenyl	73%	69%	70%	30-130%
1718-51-0	Terphenyl-d14	90%	90%	93%	30-130%

(a) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40117-MS	I92179.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
OP40117-MSD	I92180.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435
MC33900-18	I92181.D	1	10/13/14	WK	10/08/14	OP40117	MSI3435

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5

7.3.2

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CAS No.	Compound	MC33900-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	42.9	86	50	42.8	86	0	40-140/20
208-96-8	Acenaphthylene	ND		50	38.7	77	50	38.4	77	1	40-140/20
120-12-7	Anthracene	ND		50	43.9	88	50	42.5	85	3	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	50.2	100	50	49.3	99	2	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	48.3	97	50	47.2	94	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	52.2	104	50	50.6	101	3	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	47.6	95	50	46.8	94	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	45.5	91	50	45.2	90	1	40-140/20
218-01-9	Chrysene	ND		50	47.1	94	50	46.5	93	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	48.8	98	50	47.6	95	2	40-140/20
206-44-0	Fluoranthene	ND		50	46.6	93	50	45.7	91	2	40-140/20
86-73-7	Fluorene	ND		50	44.0	88	50	42.3	85	4	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	47.7	95	50	46.7	93	2	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	38.4	77	50	39.5	79	3	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	38.8	78	50	40.0	80	3	40-140/20
85-01-8	Phenanthrene	ND		50	45.2	90	50	44.1	88	2	40-140/20
129-00-0	Pyrene	ND		50	44.9	90	50	44.6	89	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC33900-18	Limits
4165-60-0	Nitrobenzene-d5	85%	81%	86%	30-130%
321-60-8	2-Fluorobiphenyl	79%	75%	76%	30-130%
1718-51-0	Terphenyl-d14	90%	90%	89%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3367-CC3361	Injection Date:	10/14/14
Lab File ID:	F76834.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	68307	4.31	241298	5.36	166272	6.89	327265	8.18	444258	10.80	455860	12.53
Upper Limit [a]	136614	4.81	482596	5.86	332544	7.39	654530	8.68	888516	11.30	911720	13.03
Lower Limit [b]	34154	3.81	120649	4.86	83136	6.39	163633	7.68	222129	10.30	227930	12.03
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40134-MB	70996	4.31	241442	5.36	164978	6.89	330677	8.18	444869	10.80	463076	12.53
OP40134-BS	75792	4.31	269309	5.36	181873	6.89	363147	8.18	484236	10.80	499922	12.53
OP40134-MS	68539	4.31	240771	5.36	161769	6.89	322622	8.18	427020	10.80	435138	12.53
OP40134-MSD	70818	4.31	249003	5.36	170289	6.89	334806	8.18	450336	10.80	453881	12.53
MC33900-22	68633	4.30	235726	5.36	161903	6.89	332764	8.18	434938	10.80	455980	12.52
ZZZZZZ	70559	4.31	260837	5.36	183280	6.89	359073	8.18	489761	10.80	518144	12.54
ZZZZZZ	70152	4.30	251797	5.36	169375	6.89	342184	8.18	447864	10.80	465557	12.53
ZZZZZZ	68878	4.30	242889	5.36	164949	6.89	341116	8.18	447155	10.80	470017	12.53
ZZZZZZ	71573	4.31	257105	5.36	181203	6.89	355683	8.18	479932	10.80	486180	12.53
OP40116-MB	79556	4.30	275075	5.36	192100	6.89	393413	8.18	516404	10.79	533438	12.53
OP40116-BS	78124	4.30	280535	5.36	190621	6.89	378194	8.18	510162	10.80	508834	12.53
OP40116-MS	74089	4.30	259119	5.36	177532	6.89	351873	8.18	467879	10.80	472619	12.53
OP40116-MSD	79991	4.30	282810	5.36	192421	6.89	384049	8.18	522431	10.80	517855	12.53
MC33900-17	77504	4.30	267251	5.36	189047	6.89	380119	8.18	492954	10.79	517308	12.52
MC34156-1	75912	4.30	261801	5.36	183476	6.89	372843	8.18	487597	10.79	507102	12.52
MC34156-2	71330	4.30	250798	5.36	176593	6.89	352975	8.18	466631	10.79	478464	12.52
MC34156-3	76739	4.30	268024	5.36	184772	6.89	376238	8.17	491205	10.79	506117	12.52
MC34156-4	73869	4.30	258970	5.35	178609	6.89	363036	8.18	478144	10.79	483508	12.52
MC34156-5	73613	4.30	255091	5.35	176476	6.89	357293	8.18	465047	10.79	472940	12.52
OP40145-MB	72253	4.30	251796	5.35	174567	6.89	349291	8.18	454870	10.79	475234	12.52
OP40145-BS	69934	4.30	248610	5.36	169527	6.89	331339	8.18	445679	10.80	457193	12.53
OP40145-MS	67820	4.30	236949	5.36	161259	6.89	317254	8.18	431232	10.80	436739	12.52
OP40145-MSD	63602	4.30	224771	5.36	151388	6.89	298990	8.18	401736	10.79	411271	12.52
MC34000-1	67993	4.30	235683	5.35	164577	6.89	329096	8.17	426703	10.79	448268	12.52

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3435-CC3427	Injection Date:	10/13/14
Lab File ID:	I92158.D	Injection Time:	08:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	322638	3.11	740819	4.13	420821	5.63	749255	6.89	597041	9.62	1218211	11.01
Upper Limit [a]	645276	3.61	1481638	4.63	841642	6.13	1498510	7.39	1194082	10.12	2436422	11.51
Lower Limit [b]	161319	2.61	370410	3.63	210411	5.13	374628	6.39	298521	9.12	609106	10.51
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40135-MB	310083	3.11	701895	4.13	409055	5.63	728477	6.89	574975	9.62	1189225	11.00
OP40135-BS	327008	3.11	753426	4.14	427053	5.63	761396	6.89	607407	9.63	1250544	11.01
OP40135-BSD	320537	3.11	743340	4.14	418873	5.63	744702	6.89	596635	9.63	1206899	11.01
ZZZZZZ	306875	3.11	697950	4.13	402831	5.63	709847	6.89	577570	9.62	1192890	11.00
ZZZZZZ	322148	3.11	722472	4.13	403362	5.63	710845	6.89	574544	9.62	1175578	11.01
ZZZZZZ	304162	3.11	693482	4.13	401471	5.63	699733	6.89	571724	9.62	1192333	11.00
ZZZZZZ	321443	3.11	725235	4.13	420988	5.63	727851	6.89	592570	9.62	1207639	11.00
ZZZZZZ	296778	3.11	674034	4.13	393169	5.63	694242	6.89	564890	9.61	1167148	11.00
ZZZZZZ	308122	3.11	702418	4.13	394628	5.63	695701	6.89	577370	9.61	1193124	11.00
OP40109-MB	356739	3.11	804504	4.13	471323	5.63	837133	6.89	684537	9.62	1410660	11.00
OP40109-BS	366193	3.11	847108	4.14	483947	5.63	862333	6.89	702519	9.63	1427769	11.01
OP40109-MS	373568	3.11	870346	4.14	487522	5.63	874968	6.89	695004	9.63	1414925	11.01
OP40109-MSD	345364	3.11	794131	4.14	448945	5.63	798608	6.90	641521	9.63	1300876	11.01
MC34126-1	357756	3.11	809069	4.13	470138	5.63	828107	6.89	677389	9.62	1397751	11.01
ZZZZZZ	331160	3.11	752405	4.13	435341	5.63	754747	6.89	629580	9.62	1289616	11.00
ZZZZZZ	354941	3.11	800970	4.13	462338	5.63	813256	6.89	663948	9.62	1316043	11.01
ZZZZZZ	333613	3.11	763393	4.13	441796	5.63	769445	6.89	637058	9.62	1287083	11.00
ZZZZZZ	336956	3.11	774741	4.13	439613	5.63	784138	6.89	671767	9.62	1303734	11.00
OP40117-MB	345397	3.11	787066	4.13	450130	5.63	790308	6.89	646728	9.62	1302774	11.00
OP40117-BS	342159	3.11	791205	4.14	447355	5.63	799252	6.89	640824	9.63	1272783	11.01
OP40117-MS	324350	3.11	754043	4.14	427967	5.63	765002	6.89	617888	9.63	1218301	11.01
OP40117-MSD	357832	3.11	836876	4.14	472748	5.63	839555	6.89	670922	9.63	1328757	11.01
MC33900-18	343314	3.11	775895	4.13	449021	5.63	779394	6.89	646491	9.62	1293578	11.00
MC34156-1	350335	3.11	794585	4.13	458875	5.63	810004	6.89	657881	9.62	1309904	11.00
MC34156-2	334727	3.11	756252	4.13	441980	5.63	763573	6.89	625805	9.62	1249581	11.00
MC34156-3	346274	3.11	782104	4.13	456055	5.63	793348	6.89	659235	9.62	1315986	11.00
MC34156-4	335813	3.11	760896	4.13	440068	5.63	766103	6.89	629202	9.62	1256793	11.00
MC34156-5	334054	3.11	755650	4.13	436368	5.63	765818	6.89	623348	9.62	1241247	11.00

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3435-CC3427	Injection Date:	10/13/14
Lab File ID:	I92158.D	Injection Time:	08:26
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34156-1	F76849.D	39	26	78	57	58	93
MC34156-2	F76850.D	48	31	96	77	77	91
MC34156-3	F76851.D	47	32	95	72	75	94
MC34156-4	F76852.D	49	32	90	70	71	88
MC34156-5	F76853.D	42	28	86	62	65	81
OP40116-BS	F76845.D	49	34	98	74	72	89
OP40116-MB	F76844.D	48	30	91	71	68	87
OP40116-MS	F76846.D	49	33	98	75	73	90
OP40116-MSD	F76847.D	48	32	97	72	69	90

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34156-1	I92182.D	66	64	91
MC34156-2	I92183.D	87	82	90
MC34156-3	I92184.D	82	80	92
MC34156-4	I92185.D	81	76	86
MC34156-5	I92186.D	72	70	79
OP40117-BS	I92178.D	84	78	89
OP40117-MB	I92177.D	80	74	86
OP40117-MS	I92179.D	85	79	90
OP40117-MSD	I92180.D	81	75	90

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-MB	BB59853.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-7

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	131%	36-173%
460-00-4	Bromofluorobenzene (S)	119%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-BS	BB59854.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.075	106	60-140
106-93-4	1,2-Dibromoethane	0.071	0.087	123	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	113%	36-173%
460-00-4	Bromofluorobenzene (S)	100%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40111-MS	BB59858.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
OP40111-MSD	BB59859.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331
MC34126-1	BB59860.D	1	10/08/14	NK	10/07/14	OP40111	GBB3331

The QC reported here applies to the following samples: Method: SW846 8011

MC34156-1, MC34156-2, MC34156-3, MC34156-4, MC34156-5, MC34156-7

CAS No.	Compound	MC34126-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0683	0.10	146* [a]	0.0675	0.11	163* [a]	10	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0683	0.11	161	0.0675	0.11	163	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34126-1	Limits
460-00-4	Bromofluorobenzene (S)	109%	140%	115%	36-173%
460-00-4	Bromofluorobenzene (S)	98%	128%	106%	36-173%

(a) Outside control limits due to possible matrix interference.

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34156-1	BB59867.D	77	66
MC34156-2	BB59868.D	87	72
MC34156-3	BB59869.D	81	69
MC34156-4	BB59870.D	86	72
MC34156-5	BB59871.D	109	95
MC34156-7	BB59872.D	96	85
OP40111-BS	BB59854.D	113	100
OP40111-MB	BB59853.D	131	119
OP40111-MS	BB59858.D	109	98
OP40111-MSD	BB59859.D	140	128

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3331-ICC3331	Injection Date:	10/08/14
Lab File ID:	BB59849.D	Injection Time:	10:41
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.49	3.50

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40121-MB	BB59853A.D	10/08/14	12:02	3.49	3.50
OP40111-MB	BB59853.D	10/08/14	12:02	3.49	3.50
OP40111-BS	BB59854.D	10/08/14	12:20	3.49	3.50
OP40121-BS1	BB59855.D	10/08/14	12:38	3.49	3.50
OP40121-BS2	BB59856.D	10/08/14	12:56	3.49	3.50
OP40121-BS3	BB59857.D	10/08/14	13:14	3.49	3.50
OP40111-MS	BB59858.D	10/08/14	13:32	3.49	3.50
OP40111-MSD	BB59859.D	10/08/14	13:50	3.49	3.50
MC34126-1	BB59860.D	10/08/14	14:08	3.49	3.50
ZZZZZZ	BB59861.D	10/08/14	14:25	3.49	3.50
ZZZZZZ	BB59862.D	10/08/14	14:43	3.49	3.50

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34156
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3332-CC3331	Injection Date:	10/09/14
Lab File ID:	BB59866.D	Injection Time:	08:58
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.49	3.50

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34156-1	BB59867.D	10/09/14	09:30	3.49	3.50
MC34156-2	BB59868.D	10/09/14	09:48	3.49	3.50
MC34156-3	BB59869.D	10/09/14	10:06	3.49	3.50
MC34156-4	BB59870.D	10/09/14	10:24	3.49	3.50
MC34156-5	BB59871.D	10/09/14	10:43	3.49	3.50
MC34156-7	BB59872.D	10/09/14	11:01	3.49	3.50
GBB3332-ECC333	BB59873.D	10/09/14	11:19	3.49	3.50

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34198

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/11/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW6D-ROX-100814	MW6D-ROX-100814-Dup
MW6C-ROX-100814	MW6B-ROX-100814
MW6A-ROX-100814-EB	MW6A-ROX-100814
MW24-ROX-100814	P54-ROX-100814
TB-ROX-100814-HCL	TB-ROX-100814-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, although not indicated in the laboratory case narrative, VOCs were detected in the equipment blank. The laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form indicated that one of two cooler was received by the laboratory at a temperature of 1.3ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW6A-ROX-100814-EB	VOCs	o-Xylene	0.63 µg/L
MW6A-ROX-100814-EB	VOCs	Xylene (total)	1.1 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification; no qualification of data was required.

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSN3380-BS/BSD	VOCs	Naphthalene	**131/135**	3	70-130/20
MSN3380-BS/BSD	VOCs	1,2,3-Trichlorobenzene	125/**131**	5	70-130/25
MSN3380-BS/BSD	VOCs	1,2,4-Trichlorobenzene	129/**132**	2	70-130/20
OP40145-BS	SVOCs	Pyridine	**30**	NA	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS/LCSD MSN3380-BS/BSD was associated with the trip blank and equipment blank, and LCS OP40145-BS was also associated with the equipment blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-100814	SVOCs	Pyridine	**UJ**
MW6D-ROX-100814-Dup	SVOCs	Pyridine	**UJ**
MW6C-ROX-100814	SVOCs	Pyridine	**UJ**
MW6B-ROX-100814	SVOCs	Pyridine	**UJ**
MW6A-ROX-100814	SVOCs	Pyridine	**UJ**
MW24-ROX-100814	SVOCs	Pyridine	**UJ**
P54-ROX-100814	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW6D-ROX-100814	MW6D-ROX-100814-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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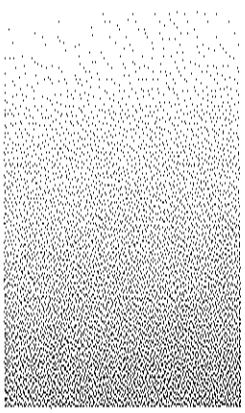
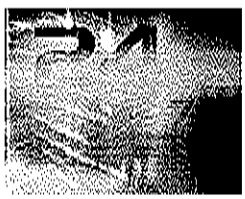
10/31/14





Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34198

Sampling Date: 10/08/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **112**

Reviewed on 11/11/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34198

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34198-1	10/08/14	09:45	MMSV	10/09/14	AQ	Ground Water	MW6D-ROX-100814
MC34198-2	10/08/14	09:45	MMSV	10/09/14	AQ	Ground Water	MW6D-ROX-100814-DUP
MC34198-3	10/08/14	10:50	MMSV	10/09/14	AQ	Ground Water	MW6C-ROX-100814
MC34198-4	10/08/14	11:40	MMSV	10/09/14	AQ	Ground Water	MW6B-ROX-100814
MC34198-5	10/08/14	12:05	MMSV	10/09/14	AQ	Equipment Blank	MW6A-ROX-100814-EB
MC34198-6	10/08/14	12:55	MMSV	10/09/14	AQ	Ground Water	MW6A-ROX-100814
MC34198-7	10/08/14	14:55	MMSV	10/09/14	AQ	Ground Water	MW24-ROX-100814
MC34198-8	10/08/14	00:00	MMSV	10/09/14	AQ	Ground Water	P54-ROX-100814
MC34198-9	10/08/14	00:00	MMSV	10/09/14	AQ	Trip Blank Water	TB-ROX-100814-HCL
MC34198-10	10/08/14	00:00	MMSV	10/09/14	AQ	Trip Blank Water	TB-ROX-100814-ST

ACCUTEST LABORATORIES

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34198
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	10/22/2014 1:59:55 PM

8 Sample(s) and 2 Trip Blank(s) were collected on 10/08/2014 and were received at Accutest on 10/09/2014 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of MC34198. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ **Batch ID:** MSN3380

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34192-9MS, MC34192-9MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSN3380-BS Recovery(s) for Naphthalene are outside control limits. Blank Spike meets program technical requirements.
- MC34192-9MS/MSD Recovery(s) for Acetone, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSN3380-BSD Recovery(s) for Naphthalene, 1,2,3-Trichlorobenzene, 1,2,4Trichlorobenzene are outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP40145

- 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.
- Sample(s) MC34000-1MS, MC34000-1MSD were used as the QC samples indicated.
- OP40145-BS/MS Recovery(s) for Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP40145-MS Recovery(s) for Aniline are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Aniline, Pyridine are outside control limits for sample OP40145-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ **Batch ID:** OP40146

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-2MS, MC34000-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40168

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

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(MC34198).

Summary of Hits

Job Number: MC34198
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/08/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34198-1	MW6D-ROX-100814					
Methyl Tert Butyl Ether		0.54 J	1.0	0.51	ug/l	SW846 8260C
Benzoic Acid		16.0	11		ug/l	SW846 8270D
MC34198-2	MW6D-ROX-100814-DUP					
Methyl Tert Butyl Ether		0.62 J	1.0	0.51	ug/l	SW846 8260C
MC34198-3	MW6C-ROX-100814					
Methyl Tert Butyl Ether		0.57 J	1.0	0.51	ug/l	SW846 8260C
MC34198-4	MW6B-ROX-100814					
Methyl Tert Butyl Ether		3.1	1.0	0.51	ug/l	SW846 8260C
MC34198-5	MW6A-ROX-100814-EB					
o-Xylene		0.63 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		1.1	1.0	0.36	ug/l	SW846 8260C
MC34198-6	MW6A-ROX-100814					
Methyl Tert Butyl Ether		8.2	1.0	0.51	ug/l	SW846 8260C
MC34198-7	MW24-ROX-100814					
No hits reported in this sample.						
MC34198-8	P54-ROX-100814					
No hits reported in this sample.						
MC34198-9	TB-ROX-100814-HCL					
No hits reported in this sample.						
MC34198-10	TB-ROX-100814-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91400.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.54	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76862.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	16.0	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL::Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.1

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.4	ug/l	
78-59-1	Isophorone	ND	5.4	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.4	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	ug/l	
110-86-1	Pyridine	ND	11	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92198.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	0.054	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		15-110%
4165-62-2	Phenol-d5	37%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	88%		30-130%
321-60-8	2-Fluorobiphenyl	81%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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:	MW6D-ROX-100814		
Lab Sample ID:	MC34198-1	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59896.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	105%		36-173%

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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91401.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.62	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76863.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.6	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.2

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.6	ug/l	
78-59-1	Isophorone	ND	5.6	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.6	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	ug/l	
110-86-1	Pyridine	ND	11	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	100%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92199.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	0.056	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

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:	MW6D-ROX-100814-DUP		
Lab Sample ID:	MC34198-2	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59897.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	106%		36-173%

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:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91402.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.57	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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RL = Reporting Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76864.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.6	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.6	ug/l	
78-59-1	Isophorone	ND	5.6	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.6	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	ug/l	
110-86-1	Pyridine	ND	11	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	94%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92200.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	0.056	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	94%		15-110%
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	74%		30-130%
1718-51-0	Terphenyl-d14	90%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-100814		
Lab Sample ID:	MC34198-3	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59898.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		36-173%
460-00-4	Bromofluorobenzene (S)	95%		36-173%

ND = Not detected
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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:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91403.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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Report of Analysis

Client Sample ID:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.1	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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Report of Analysis

Client Sample ID:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76865.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	21	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.3	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	ug/l	
132-64-9	Dibenzofuran	ND	2.1	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	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:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.3	ug/l	
78-59-1	Isophorone	ND	5.3	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.3	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	ug/l	
110-86-1	Pyridine	ND	11	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92201.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	ug/l	
85-01-8	Phenanthrene	ND	0.053	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

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:	MW6B-ROX-100814		
Lab Sample ID:	MC34198-4	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59899.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	82%		36-173%
460-00-4	Bromofluorobenzene (S)	89%		36-173%

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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91404.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.63	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	1.1	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76866.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	21	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.3	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	ug/l	
132-64-9	Dibenzofuran	ND	2.1	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.3	ug/l	
78-59-1	Isophorone	ND	5.3	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.3	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	ug/l	
110-86-1	Pyridine	ND	11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		15-110%
4165-62-2	Phenol-d5	24%		15-110%
118-79-6	2,4,6-Tribromophenol	85%		15-110%
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92202.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	ug/l	
85-01-8	Phenanthrene	ND	0.053	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	83%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

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:	MW6A-ROX-100814-EB		
Lab Sample ID:	MC34198-5	Date Sampled:	10/08/14
Matrix:	AQ - Equipment Blank	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59900.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	93%		36-173%
460-00-4	Bromofluorobenzene (S)	103%		36-173%

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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91405.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	8.2	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76867.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	21	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.3	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	ug/l	
132-64-9	Dibenzofuran	ND	2.1	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.3	ug/l	
78-59-1	Isophorone	ND	5.3	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.3	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	ug/l	
110-86-1	Pyridine	ND	11	ug/l	us

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	102%		15-110%
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92203.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	ug/l	
85-01-8	Phenanthrene	ND	0.053	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		15-110%
4165-62-2	Phenol-d5	36%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	89%		30-130%
321-60-8	2-Fluorobiphenyl	83%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

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:	MW6A-ROX-100814		
Lab Sample ID:	MC34198-6	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59901.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	143%		36-173%

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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91406.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76868.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.4	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.4	ug/l	
78-59-1	Isophorone	ND	5.4	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.4	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	ug/l	
110-86-1	Pyridine	ND	11	ug/l	U5

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	i92204.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	0.054	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	94%		30-130%

ND = Not detected
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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:	MW24-ROX-100814		
Lab Sample ID:	MC34198-7	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59903.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	95%		36-173%

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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91407.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76869.D	1	10/15/14	WK	10/10/14	OP40145	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	11	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	ug/l	
95-48-7	2-Methylphenol	ND	11	ug/l	
	3&4-Methylphenol	ND	11	ug/l	
88-75-5	2-Nitrophenol	ND	11	ug/l	
100-02-7	4-Nitrophenol	ND	22	ug/l	
87-86-5	Pentachlorophenol	ND	11	ug/l	
108-95-2	Phenol	ND	5.6	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	ug/l	
62-53-3	Aniline	ND	11	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	ug/l	
100-51-6	Benzyl Alcohol	ND	11	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	ug/l	
106-47-8	4-Chloroaniline	ND	11	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	ug/l	
132-64-9	Dibenzofuran	ND	2.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	ug/l	
67-72-1	Hexachloroethane	ND	5.6	ug/l	
78-59-1	Isophorone	ND	5.6	ug/l	
88-74-4	2-Nitroaniline	ND	11	ug/l	
99-09-2	3-Nitroaniline	ND	11	ug/l	
100-01-6	4-Nitroaniline	ND	11	ug/l	
98-95-3	Nitrobenzene	ND	5.6	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	ug/l	
110-86-1	Pyridine	ND	11	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92205.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.11	ug/l	
120-12-7	Anthracene	ND	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	ug/l	
218-01-9	Chrysene	ND	0.11	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	ug/l	
206-44-0	Fluoranthene	ND	0.11	ug/l	
86-73-7	Fluorene	ND	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	0.056	ug/l	
129-00-0	Pyrene	ND	0.11	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		15-110%
4165-62-2	Phenol-d5	38%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	92%		30-130%
321-60-8	2-Fluorobiphenyl	84%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

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:	P54-ROX-100814		
Lab Sample ID:	MC34198-8	Date Sampled:	10/08/14
Matrix:	AQ - Ground Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59904.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	83%		36-173%
460-00-4	Bromofluorobenzene (S)	91%		36-173%

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:	TB-ROX-100814-HCL		
Lab Sample ID:	MC34198-9	Date Sampled:	10/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91396.D	1	10/20/14	TT	n/a	n/a	MSN3380
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100814-HCL		
Lab Sample ID:	MC34198-9	Date Sampled:	10/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.9

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100814-HCL		
Lab Sample ID:	MC34198-9	Date Sampled:	10/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	100%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100814-ST		
Lab Sample ID:	MC34198-10	Date Sampled:	10/08/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/09/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59905.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		36-173%
460-00-4	Bromofluorobenzene (S)	93%		36-173%

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

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION): [ ] WNCO [ ] CALSCIENCE [ ] OTHER (Lancaster Laboratories, 2425 New Holland Pike, Lancaster, PA 17601 (717-656-2300)) [ ] Lab Vendor # [ ] Lab Vendor # [ ] Lab Vendor #

Please Check Appropriate Box: [x] SOC SERVICES [ ] MOTIVA RETAIL [ ] SHELL RETAIL [ ] MOTIVA SOMOCO [ ] CONSULTANT [ ] LUBES [ ] SHELL PIPELINE [ ] OTHER

Print Bill To Contact Name: Bob Billman

INCIDENT # (ENV SERVICES): 0 7 2 1 5 0 4 0 — [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 10/8/14

PO #:

SAP #: 3 4 0 0 0 1

PAGE: 1 of 1

COMPANY NAME / ADDRESS	URS CORPORATION, 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT (Hardcopy or PDF Report to)	Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathbone
TELEPHONE	314-429-0100
FAX	314-429-0462
E-mail Address	Elizabeth.Kunkel@URS.com, wendy.pennington@urs.com, Bob.Billman@URS.com, Lindsay.Rathbone@URS.com
TURNAROUND TIME (CALENDAR DAYS)	[x] STANDARD (10 DAY) [ ] 7 DAYS [ ] 5 DAYS [ ] 3 DAYS [ ] 2 DAYS [ ] 24 HOURS [ ] RESULTS NEEDED ON WEEKEND
[ ] RA - RWQCB REPORT FORMAT	[ ] UST AGENCY:
DELIVERABLES	[ ] LEVEL 1 [x] LEVEL 2 [ ] LEVEL 3 [x] LEVEL 4 [x] OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C°	Cooler #1 / Cooler #2 / Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login

[x] SHELL CONTRACT RATE APPLIES
[ ] STATE REQUIRED SHELL RATE SHEET
[ ] EDD NOT NEEDED
[x] RECEIPT VERIFICATION REQUESTED
[ ] PROVIDE LEVEL IV DISK

Site Address / City	Site #	Project #	Consultant Project No.
600 South Central Ave; ROXANA	IL		Roxana Quarterly GW / 21582977.03004

Project Manager: M. Manster, S. Voss

LAB USE ONLY: MC34198

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
-1	MW6D-ROX-100814	10/8	945	water	2			2	2	6	X	X	X	X	0	
-2	MW6D-ROX-100814 DUP		945								X	X	X	X		
-3	MW6C-ROX-100814		1050								X	X	X	X		
-4	MW6B-ROX-100814		1140								X	X	X	X		
-5	MW6A-ROX-100814 FB		1205								X	X	X	X		
-6	MW6A-ROX-100814		1255								X	X	X	X		
-7	MW2A-ROX-100814		1455								X	X	X	X		
-8	PS4-ROX-100814				2			2	x1	6	X	X	X	X		188.2DI,
-9	TB-ROX-100814 HCL		0000		2					2	X					
-10	TB-ROX-100814 ST		0000						2	2		X				

Relinquished by (Signature)	Received by (Signature)	Date	Time
Stephanie Van FEDEX	FED EX	10/8/14	
		10-9-14	9:30

1.3°-2.4°C

5.1

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34198 Client: URS Project: 900 SOUTH CENTRAL

Date / Time Received: 10/9/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (1.3/1.3); #2: (2.4/2.4);

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	2

Quality Control Preservation	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 01752
www.accutest.com

5.1

MC34198: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34198

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34198-1 Collected: 08-OCT-14 09:45 By: MMSV Received: 09-OCT-14 By: MW6D-ROX-100814						
MC34198-1	SW846 8011	13-OCT-14 14:19	NK	12-OCT-14	MT	V8011SL
MC34198-1	SW846 8270D BY SIM	14-OCT-14 11:13	WK	11-OCT-14	PA	B8270SIMSL
MC34198-1	SW846 8270D	15-OCT-14 08:26	WK	10-OCT-14	PA	AB8270SL+
MC34198-1	SW846 8260C	20-OCT-14 13:51	TT			V8260SL+
MC34198-2 Collected: 08-OCT-14 09:45 By: MMSV Received: 09-OCT-14 By: MW6D-ROX-100814-DUP						
MC34198-2	SW846 8011	13-OCT-14 14:37	NK	12-OCT-14	MT	V8011SL
MC34198-2	SW846 8270D BY SIM	14-OCT-14 11:36	WK	11-OCT-14	PA	B8270SIMSL
MC34198-2	SW846 8270D	15-OCT-14 08:50	WK	10-OCT-14	PA	AB8270SL+
MC34198-2	SW846 8260C	20-OCT-14 14:19	TT			V8260SL+
MC34198-3 Collected: 08-OCT-14 10:50 By: MMSV Received: 09-OCT-14 By: MW6C-ROX-100814						
MC34198-3	SW846 8011	13-OCT-14 14:55	NK	12-OCT-14	MT	V8011SL
MC34198-3	SW846 8270D BY SIM	14-OCT-14 11:59	WK	11-OCT-14	PA	B8270SIMSL
MC34198-3	SW846 8270D	15-OCT-14 09:13	WK	10-OCT-14	PA	AB8270SL+
MC34198-3	SW846 8260C	20-OCT-14 14:47	TT			V8260SL+
MC34198-4 Collected: 08-OCT-14 11:40 By: MMSV Received: 09-OCT-14 By: MW6B-ROX-100814						
MC34198-4	SW846 8011	13-OCT-14 15:14	NK	12-OCT-14	MT	V8011SL
MC34198-4	SW846 8270D BY SIM	14-OCT-14 12:21	WK	11-OCT-14	PA	B8270SIMSL
MC34198-4	SW846 8270D	15-OCT-14 09:36	WK	10-OCT-14	PA	AB8270SL+
MC34198-4	SW846 8260C	20-OCT-14 15:15	TT			V8260SL+
MC34198-5 Collected: 08-OCT-14 12:05 By: MMSV Received: 09-OCT-14 By: MW6A-ROX-100814-EB						
MC34198-5	SW846 8011	13-OCT-14 15:32	NK	12-OCT-14	MT	V8011SL
MC34198-5	SW846 8270D BY SIM	14-OCT-14 12:44	WK	11-OCT-14	PA	B8270SIMSL
MC34198-5	SW846 8270D	15-OCT-14 09:59	WK	10-OCT-14	PA	AB8270SL+
MC34198-5	SW846 8260C	20-OCT-14 15:44	TT			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34198

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34198-6 Collected: 08-OCT-14 12:55 By: MMSV Received: 09-OCT-14 By: MW6A-ROX-100814						
MC34198-6	SW846 8011	13-OCT-14 15:50	NK	12-OCT-14	MT	V8011SL
MC34198-6	SW846 8270D BY SIM	14-OCT-14 13:07	WK	11-OCT-14	PA	B8270SIMSL
MC34198-6	SW846 8270D	15-OCT-14 10:22	WK	10-OCT-14	PA	AB8270SL+
MC34198-6	SW846 8260C	20-OCT-14 16:12	TT			V8260SL+
MC34198-7 Collected: 08-OCT-14 14:55 By: MMSV Received: 09-OCT-14 By: MW24-ROX-100814						
MC34198-7	SW846 8011	13-OCT-14 16:27	NK	12-OCT-14	MT	V8011SL
MC34198-7	SW846 8270D BY SIM	14-OCT-14 13:29	WK	11-OCT-14	PA	B8270SIMSL
MC34198-7	SW846 8270D	15-OCT-14 10:46	WK	10-OCT-14	PA	AB8270SL+
MC34198-7	SW846 8260C	20-OCT-14 16:40	TT			V8260SL+
MC34198-8 Collected: 08-OCT-14 00:00 By: MMSV Received: 09-OCT-14 By: P54-ROX-100814						
MC34198-8	SW846 8011	13-OCT-14 16:46	NK	12-OCT-14	MT	V8011SL
MC34198-8	SW846 8270D BY SIM	14-OCT-14 13:52	WK	11-OCT-14	PA	B8270SIMSL
MC34198-8	SW846 8270D	15-OCT-14 11:09	WK	10-OCT-14	PA	AB8270SL+
MC34198-8	SW846 8260C	20-OCT-14 17:08	TT			V8260SL+
MC34198-9 Collected: 08-OCT-14 00:00 By: MMSV Received: 09-OCT-14 By: TB-ROX-100814-HCL						
MC34198-9	SW846 8260C	20-OCT-14 11:57	TT			V8260SL+
MC34198-10 Collected: 08-OCT-14 00:00 By: MMSV Received: 09-OCT-14 By: TB-ROX-100814-ST						
MC34198-10	SW846 8011	13-OCT-14 17:04	NK	12-OCT-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34198-1.1	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-1.1	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-1.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-1.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-1.4	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-1.4	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-1.4	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-1.4	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-1.6	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-2.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-2.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-2.2	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-2.2	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-2.3	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-2.3	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-2.3	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-2.3	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-2.6	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-3.1	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-3.1	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-3.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-3.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-3.4	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-3.4	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-3.4	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-3.4	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-3.5	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-4.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-4.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-4.2	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-4.2	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-4.3	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/09/14

Sample,Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34198-4.3	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-4.3	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-4.3	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-4.5	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-5.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-5.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-5.2	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-5.2	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-5.3	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-5.3	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-5.3	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-5.3	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-5.6	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-6.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-6.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-6.2	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-6.2	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-6.3	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-6.3	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-6.3	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-6.3	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-6.5	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-7.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-7.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-7.2	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-7.2	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-7.4	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-7.4	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-7.4	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-7.4	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-7.6	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/09/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34198-8.1	Walk In Ref #22	Thomas Abruzzise	10/09/14 19:27	Retrieve from Storage
MC34198-8.1	Thomas Abruzzise	Walk In Ref #22	10/09/14 19:39	Return to Storage
MC34198-8.1	Walk In Ref #22	Alireza Zeighami	10/10/14 07:08	Retrieve from Storage
MC34198-8.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34198-8.3	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-8.3	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-8.3	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-8.3	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-8.5	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34198-9.2	VOC Ref #2	Tomasz Torski	10/20/14 09:51	Retrieve from Storage
MC34198-9.2	Tomasz Torski	GCMSN	10/20/14 09:51	Load on Instrument
MC34198-9.2	GCMSN	Jaclyn Bergeron	10/21/14 09:31	Unload from Instrument
MC34198-9.2	Jaclyn Bergeron	VOC Ref #2	10/21/14 09:31	Return to Storage
MC34198-10.1	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage

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: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-MB	N91393.D	1	10/20/14	TT	n/a	n/a	MSN3380

6.1.1

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	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	
74-97-5	Bromochloromethane	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	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	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	
124-48-1	Dibromochloromethane	ND	1.0	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	

Method Blank Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-MB	N91393.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	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	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	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	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/l	
108-05-4	Vinyl Acetate	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	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-MB	N91393.D	1	10/20/14	TT	n/a	n/a	MSN3380

6.1.1

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-BS	N91390.D	1	10/20/14	TT	n/a	n/a	MSN3380
MSN3380-BSD	N91391.D	1	10/20/14	TT	n/a	n/a	MSN3380

6.2.1

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	42.7	85	40.7	81	5	70-130/20
107-02-8	Acrolein	250	285	114	280	112	2	70-130/20
107-13-1	Acrylonitrile	50	53.2	106	49.9	100	6	70-130/20
71-43-2	Benzene	50	48.4	97	47.8	96	1	70-130/20
108-86-1	Bromobenzene	50	57.1	114	56.0	112	2	70-130/20
74-97-5	Bromochloromethane	50	53.6	107	55.1	110	3	70-130/20
75-27-4	Bromodichloromethane	50	55.0	110	54.6	109	1	70-130/20
75-25-2	Bromoform	50	57.3	115	57.8	116	1	70-130/20
74-83-9	Bromomethane	50	63.3	127	62.9	126	1	70-130/20
78-93-3	2-Butanone (MEK)	50	51.8	104	51.5	103	1	70-130/20
104-51-8	n-Butylbenzene	50	62.9	126	62.4	125	1	70-130/20
135-98-8	sec-Butylbenzene	50	60.4	121	60.4	121	0	70-130/20
98-06-6	tert-Butylbenzene	50	58.5	117	58.1	116	1	70-130/20
75-15-0	Carbon disulfide	50	48.5	97	49.1	98	1	70-130/20
56-23-5	Carbon tetrachloride	50	55.4	111	55.2	110	0	70-130/20
108-90-7	Chlorobenzene	50	53.1	106	54.0	108	2	70-130/20
75-00-3	Chloroethane	50	63.5	127	64.1	128	1	70-130/20
110-75-8	2-Chloroethyl vinyl ether	50	59.6	119	58.3	117	2	70-130/20
67-66-3	Chloroform	50	50.1	100	49.9	100	0	70-130/20
74-87-3	Chloromethane	50	56.1	112	53.1	106	5	70-130/20
95-49-8	o-Chlorotoluene	50	55.9	112	56.5	113	1	70-130/20
106-43-4	p-Chlorotoluene	50	55.4	111	55.8	112	1	70-130/20
124-48-1	Dibromochloromethane	50	58.9	118	58.5	117	1	70-130/20
95-50-1	1,2-Dichlorobenzene	50	59.9	120	59.8	120	0	70-130/20
541-73-1	1,3-Dichlorobenzene	50	58.2	116	57.4	115	1	70-130/20
106-46-7	1,4-Dichlorobenzene	50	61.2	122	62.4	125	2	70-130/20
75-71-8	Dichlorodifluoromethane	50	51.2	102	52.2	104	2	70-130/20
75-34-3	1,1-Dichloroethane	50	50.3	101	50.9	102	1	70-130/20
107-06-2	1,2-Dichloroethane	50	48.4	97	47.4	95	2	70-130/20
75-35-4	1,1-Dichloroethene	50	54.3	109	53.6	107	1	70-130/20
156-59-2	cis-1,2-Dichloroethene	50	50.2	100	50.8	102	1	70-130/20
156-60-5	trans-1,2-Dichloroethene	50	50.0	100	49.5	99	1	70-130/20
78-87-5	1,2-Dichloropropane	50	58.8	118	57.6	115	2	70-130/20
142-28-9	1,3-Dichloropropane	50	57.9	116	57.9	116	0	70-130/20
594-20-7	2,2-Dichloropropane	50	56.4	113	56.8	114	1	70-130/20
563-58-6	1,1-Dichloropropene	50	60.2	120	59.3	119	2	70-130/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-BS	N91390.D	1	10/20/14	TT	n/a	n/a	MSN3380
MSN3380-BSD	N91391.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	59.1	118	58.3	117	1	70-130/20
10061-02-6	trans-1,3-Dichloropropene	50	61.1	122	60.8	122	0	70-130/20
123-91-1	1,4-Dioxane	125	126	101	131	105	4	70-130/20
97-63-2	Ethyl methacrylate	50	53.3	107	54.1	108	1	77-137/20
100-41-4	Ethylbenzene	50	55.5	111	55.1	110	1	70-130/20
87-68-3	Hexachlorobutadiene	50	64.0	128	63.5	127	1	70-130/20
591-78-6	2-Hexanone	50	53.3	107	50.9	102	5	70-130/20
98-82-8	Isopropylbenzene	50	57.8	116	58.4	117	1	70-130/20
99-87-6	p-Isopropyltoluene	50	60.8	122	61.2	122	1	70-130/20
1634-04-4	Methyl Tert Butyl Ether	50	39.7	79	41.2	82	4	70-130/20
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.4	101	49.3	99	2	70-130/20
74-95-3	Methylene bromide	50	54.0	108	53.5	107	1	70-130/20
75-09-2	Methylene chloride	50	49.2	98	49.2	98	0	70-130/20
91-20-3	Naphthalene	50	65.6	131* [a]	67.6	135* [a]	3	70-130/20
103-65-1	n-Propylbenzene	50	59.8	120	59.7	119	0	70-130/20
100-42-5	Styrene	50	61.9	124	61.5	123	1	70-130/20
630-20-6	1,1,1,2-Tetrachloroethane	50	57.8	116	56.8	114	2	70-130/20
79-34-5	1,1,2,2-Tetrachloroethane	50	59.7	119	58.7	117	2	70-130/20
127-18-4	Tetrachloroethene	50	56.5	113	55.3	111	2	70-130/20
108-88-3	Toluene	50	52.5	105	52.3	105	0	70-130/20
87-61-6	1,2,3-Trichlorobenzene	50	62.4	125	65.5	131* [a]	5	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	64.6	129	66.2	132* [a]	2	70-130/20
71-55-6	1,1,1-Trichloroethane	50	58.5	117	59.2	118	1	70-130/20
79-00-5	1,1,2-Trichloroethane	50	51.0	102	51.1	102	0	70-130/20
79-01-6	Trichloroethene	50	49.2	98	48.3	97	2	70-130/20
75-69-4	Trichlorofluoromethane	50	48.1	96	48.7	97	1	70-130/20
96-18-4	1,2,3-Trichloropropane	50	55.6	111	56.0	112	1	70-130/20
95-63-6	1,2,4-Trimethylbenzene	50	52.8	106	53.4	107	1	70-130/20
108-67-8	1,3,5-Trimethylbenzene	50	51.1	102	51.5	103	1	70-130/20
108-05-4	Vinyl Acetate	50	51.8	104	50.6	101	2	70-130/20
75-01-4	Vinyl chloride	50	59.3	119	60.1	120	1	70-130/20
	m,p-Xylene	100	106	106	105	105	1	70-130/20
95-47-6	o-Xylene	50	54.4	109	53.9	108	1	70-130/20
1330-20-7	Xylene (total)	150	160	107	159	106	1	70-130/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3380-BS	N91390.D	1	10/20/14	TT	n/a	n/a	MSN3380
MSN3380-BSD	N91391.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	96%	70-130%
2037-26-5	Toluene-D8	105%	103%	70-130%
460-00-4	4-Bromofluorobenzene	93%	93%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34192-9MS	N91412.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9MSD	N91413.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9	N91399.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	MC34192-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	109	44* [a]	250	120	48* [a]	10	70-130/30
107-02-8	Acrolein	ND		1250	1350	108	1250	1330	106	1	70-130/30
107-13-1	Acrylonitrile	ND		250	254	102	250	240	96	6	70-130/30
71-43-2	Benzene	10.9		250	266	102	250	245	94	8	70-130/30
108-86-1	Bromobenzene	ND		250	265	106	250	260	104	2	70-130/30
74-97-5	Bromochloromethane	ND		250	261	104	250	261	104	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	252	101	250	245	98	3	70-130/30
75-25-2	Bromoform	ND		250	261	104	250	272	109	4	70-130/30
74-83-9	Bromomethane	ND		250	256	102	250	284	114	10	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	213	85	250	213	85	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	269	108	250	272	109	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	273	109	250	271	108	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	258	103	250	258	103	0	70-130/30
75-15-0	Carbon disulfide	ND		250	259	104	250	252	101	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	249	100	250	243	97	2	70-130/30
108-90-7	Chlorobenzene	ND		250	244	98	250	249	100	2	70-130/30
75-00-3	Chloroethane	ND		250	314	126	250	305	122	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	278	111	250	273	109	2	70-130/30
67-66-3	Chloroform	ND		250	230	92	250	224	90	3	70-130/30
74-87-3	Chloromethane	ND		250	218	87	250	217	87	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	259	104	250	255	102	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	254	102	250	253	101	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	259	104	250	270	108	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	280	112	250	278	111	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	266	106	250	265	106	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	287	115	250	287	115	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	243	97	250	232	93	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	238	95	250	234	94	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	226	90	250	215	86	5	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	266	106	250	273	109	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	241	96	250	237	95	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	243	97	250	241	96	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	275	110	250	269	108	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	260	104	250	272	109	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	248	99	250	242	97	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	275	110	250	273	109	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34192-9MS	N91412.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9MSD	N91413.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9	N91399.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

CAS No.	Compound	MC34192-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	280	112	250	269	108	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	291	116	250	279	112	4	70-130/30
123-91-1	1,4-Dioxane	ND		625	649	104	625	630	101	3	70-130/30
97-63-2	Ethyl methacrylate	ND		250	274	110	250	264	106	4	72-139/30
100-41-4	Ethylbenzene	5.8		250	249	97	250	252	98	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	261	104	250	275	110	5	70-130/30
591-78-6	2-Hexanone	ND		250	194	78	250	203	81	5	70-130/30
98-82-8	Isopropylbenzene	0.45		250	270	108	250	266	106	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	274	110	250	272	109	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	229	92	250	232	93	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	242	97	250	232	93	4	70-130/30
74-95-3	Methylene bromide	ND		250	259	104	250	252	101	3	70-130/30
75-09-2	Methylene chloride	ND		250	249	100	250	237	95	5	70-130/30
91-20-3	Naphthalene	ND		250	329	132* [a]	250	331	132* [a]	1	70-130/30
103-65-1	n-Propylbenzene	ND		250	269	108	250	266	106	1	70-130/30
100-42-5	Styrene	ND		250	275	110	250	279	112	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	254	102	250	261	104	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	293	117	250	290	116	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	245	98	250	254	102	4	70-130/30
108-88-3	Toluene	ND		250	251	100	250	243	97	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	283	113	250	296	118	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	285	114	250	302	121	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	272	109	250	262	105	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	246	98	250	233	93	5	70-130/30
79-01-6	Trichloroethene	ND		250	234	94	250	226	90	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	242	97	250	233	93	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	272	109	250	273	109	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	1.5		250	249	99	250	245	97	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	0.77		250	235	94	250	236	94	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	244	98	250	242	97	1	70-130/30
75-01-4	Vinyl chloride	ND		250	269	108	250	260	104	3	70-130/30
	m,p-Xylene	20.6		500	487	93	500	496	95	2	70-130/30
95-47-6	o-Xylene	ND		250	243	97	250	248	99	2	70-130/30
1330-20-7	Xylene (total)	20.6		750	730	95	750	744	96	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34192-9MS	N91412.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9MSD	N91413.D	5	10/20/14	TT	n/a	n/a	MSN3380
MC34192-9	N91399.D	1	10/20/14	TT	n/a	n/a	MSN3380

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

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-9

6.3.1

CAS No.	Surrogate Recoveries	MS	MSD	MC34192-9	Limits
1868-53-7	Dibromofluoromethane	94%	93%	96%	70-130%
2037-26-5	Toluene-D8	103%	102%	100%	70-130%
460-00-4	4-Bromofluorobenzene	94%	94%	100%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3380-CC3345	Injection Date:	10/20/14
Lab File ID:	N91389.D	Injection Time:	08:39
Instrument ID:	GCMSN	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	290647	9.12	452768	9.98	243487	13.24	197114	15.79	84089	6.70
Upper Limit [a]	581294	9.62	905536	10.48	486974	13.74	394228	16.29	168178	7.20
Lower Limit [b]	145324	8.62	226384	9.48	121744	12.74	98557	15.29	42045	6.20
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3380-BS	303883	9.12	473980	9.98	246725	13.24	205358	15.79	96971	6.70
MSN3380-BSD	310783	9.11	492920	9.99	255067	13.24	210537	15.79	95843	6.70
MSN3380-MB	274087	9.12	433757	9.98	216809	13.24	158587	15.80	86083	6.72
ZZZZZZ	275145	9.11	428903	9.99	217333	13.24	157266	15.80	96726	6.72
ZZZZZZ	269783	9.12	413787	9.98	212643	13.24	152898	15.80	80047	6.72
MC34198-9	265006	9.12	407371	9.99	205989	13.24	149700	15.80	84231	6.72
ZZZZZZ	260380	9.11	404456	9.99	205158	13.24	147139	15.80	88423	6.71
ZZZZZZ	257508	9.12	393921	9.99	200765	13.24	143581	15.80	90509	6.72
MC34192-9	254434	9.12	397176	9.99	201467	13.24	148518	15.79	82305	6.72
MC34198-1	252448	9.12	391249	9.98	198385	13.24	144958	15.80	83192	6.71
MC34198-2	251696	9.12	392611	9.99	201447	13.24	145377	15.80	84242	6.71
MC34198-3	252351	9.12	387766	9.99	196406	13.24	142467	15.80	80581	6.72
MC34198-4	251062	9.12	390490	9.99	196492	13.24	145497	15.79	86309	6.71
MC34198-5	255375	9.11	391621	9.99	197899	13.24	142524	15.80	93025	6.71
MC34198-6	252657	9.12	397501	9.99	201158	13.24	149066	15.80	97913	6.71
MC34198-7	242142	9.12	382450	9.98	193768	13.24	140573	15.80	82235	6.72
MC34198-8	247471	9.12	384374	9.99	194449	13.24	139337	15.80	83512	6.71
ZZZZZZ	249443	9.11	535302	9.99	233174	13.24	161530	15.80	83062	6.71
ZZZZZZ	276323	9.12	575485	9.99	252440	13.24	175191	15.80	96846	6.71
ZZZZZZ	309310	9.11	523063	9.98	251319	13.24	218980	15.79	116792	6.71
ZZZZZZ	325646	9.12	589218	9.99	265517	13.24	220108	15.80	119968	6.71
MC34192-9MS	346596	9.12	535252	9.98	291078	13.24	229604	15.79	122003	6.70
MC34192-9MSD	364543	9.12	566062	9.99	289927	13.24	234786	15.79	124118	6.69

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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34198-1	N91400.D	97	102	98
MC34198-2	N91401.D	99	102	100
MC34198-3	N91402.D	95	101	99
MC34198-4	N91403.D	97	101	99
MC34198-5	N91404.D	97	99	102
MC34198-6	N91405.D	100	100	101
MC34198-7	N91406.D	98	101	100
MC34198-8	N91407.D	99	102	101
MC34198-9	N91396.D	98	102	100
MC34192-9MS	N91412.D	94	103	94
MC34192-9MSD	N91413.D	93	102	94
MSN3380-BS	N91390.D	97	105	93
MSN3380-BSD	N91391.D	96	103	93
MSN3380-MB	N91393.D	97	100	99

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

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-MB	F76854.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	

Method Blank Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-MB	F76854.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Result	RL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	97%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	97%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40146-MB	I92193.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	83%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

Blank Spike Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-BS	F76855.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.7	37	30-130
95-57-8	2-Chlorophenol	50	40.4	81	30-130
59-50-7	4-Chloro-3-methyl phenol	50	40.5	81	30-130
120-83-2	2,4-Dichlorophenol	50	42.4	85	30-130
105-67-9	2,4-Dimethylphenol	50	35.9	72	30-130
51-28-5	2,4-Dinitrophenol	50	52.3	105	30-130
534-52-1	4,6-Dinitro-o-cresol	50	54.7	109	30-130
95-48-7	2-Methylphenol	50	34.8	70	30-130
	3&4-Methylphenol	100	65.6	66	30-130
88-75-5	2-Nitrophenol	50	44.2	88	30-130
100-02-7	4-Nitrophenol	50	16.4	33	30-130
87-86-5	Pentachlorophenol	50	42.5	85	30-130
108-95-2	Phenol	50	16.2	32	30-130
95-95-4	2,4,5-Trichlorophenol	50	39.5	79	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.4	81	30-130
62-53-3	Aniline	50	24.3	49	40-140
101-55-3	4-Bromophenyl phenyl ether	50	45.8	92	40-140
85-68-7	Butyl benzyl phthalate	50	52.8	106	40-140
100-51-6	Benzyl Alcohol	50	36.4	73	40-140
91-58-7	2-Chloronaphthalene	50	45.5	91	40-140
106-47-8	4-Chloroaniline	50	35.7	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	40.8	82	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.7	85	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	51.2	102	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	42.0	84	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.3	83	40-140
121-14-2	2,4-Dinitrotoluene	50	52.1	104	40-140
606-20-2	2,6-Dinitrotoluene	50	49.7	99	40-140
91-94-1	3,3'-Dichlorobenzidine	50	60.0	120	40-140
132-64-9	Dibenzofuran	50	41.4	83	40-140
84-74-2	Di-n-butyl phthalate	50	48.3	97	40-140
117-84-0	Di-n-octyl phthalate	50	45.0	90	40-140
84-66-2	Diethyl phthalate	50	45.9	92	40-140
131-11-3	Dimethyl phthalate	50	46.3	93	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	54.2	108	40-140
118-74-1	Hexachlorobenzene	50	45.3	91	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-BS	F76855.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	28.0	56	40-140
67-72-1	Hexachloroethane	50	38.6	77	40-140
78-59-1	Isophorone	50	37.8	76	40-140
88-74-4	2-Nitroaniline	50	46.3	93	40-140
99-09-2	3-Nitroaniline	50	42.9	86	40-140
100-01-6	4-Nitroaniline	50	46.4	93	40-140
98-95-3	Nitrobenzene	50	39.8	80	40-140
62-75-9	n-Nitrosodimethylamine	50	29.6	59	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.9	88	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.1	88	40-140
110-86-1	Pyridine	50	15.1	30* [a]	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	50%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	102%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40146-BS	I92194.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	45.2	90	40-140
208-96-8	Acenaphthylene	50	40.6	81	40-140
120-12-7	Anthracene	50	45.8	92	40-140
56-55-3	Benzo(a)anthracene	50	53.8	108	40-140
50-32-8	Benzo(a)pyrene	50	51.1	102	40-140
205-99-2	Benzo(b)fluoranthene	50	51.0	102	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.0	102	40-140
207-08-9	Benzo(k)fluoranthene	50	45.8	92	40-140
218-01-9	Chrysene	50	50.3	101	40-140
53-70-3	Dibenzo(a,h)anthracene	50	51.5	103	40-140
206-44-0	Fluoranthene	50	50.2	100	40-140
86-73-7	Fluorene	50	44.6	89	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	50.7	101	40-140
90-12-0	1-Methylnaphthalene	50	43.1	86	40-140
91-57-6	2-Methylnaphthalene	50	43.5	87	40-140
85-01-8	Phenanthrene	50	47.6	95	40-140
129-00-0	Pyrene	50	48.6	97	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	97%	15-110%
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	84%	30-130%
1718-51-0	Terphenyl-d14	97%	30-130%

* = Outside of Control Limits.

7.2.2

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-MS	F76856.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367
OP40145-MSD	F76857.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367
MC34000-1	F76858.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

CAS No.	Compound	MC34000-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	19.2	38	50	19.8	40	3	30-130/20
95-57-8	2-Chlorophenol	ND		50	39.8	80	50	43.0	86	8	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	40.4	81	50	43.4	87	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	42.2	84	50	45.4	91	7	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	35.5	71	50	39.1	78	10	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	56.3	113	50	58.8	118	4	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	57.6	115	50	59.5	119	3	30-130/20
95-48-7	2-Methylphenol	ND		50	35.0	70	50	37.5	75	7	30-130/20
	3&4-Methylphenol	ND		100	64.6	65	100	70.0	70	8	30-130/20
88-75-5	2-Nitrophenol	ND		50	44.6	89	50	48.5	97	8	30-130/20
100-02-7	4-Nitrophenol	ND		50	17.2	34	50	17.8	36	3	30-130/20
87-86-5	Pentachlorophenol	ND		50	43.6	87	50	45.3	91	4	30-130/20
108-95-2	Phenol	ND		50	16.0	32	50	16.8	34	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	40.2	80	50	43.4	87	8	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	40.8	82	50	44.0	88	8	30-130/20
62-53-3	Aniline	ND		50	18.9	38* [a]	50	29.6	59	44* [b]	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	46.5	93	50	49.7	99	7	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	52.7	105	50	56.0	112	6	40-140/20
100-51-6	Benzyl Alcohol	ND		50	34.6	69	50	38.0	76	9	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	45.1	90	50	50.2	100	11	40-140/20
106-47-8	4-Chloroaniline	ND		50	33.1	66	50	38.7	77	16	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	39.8	80	50	43.7	87	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	41.5	83	50	45.1	90	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	50.0	100	50	54.7	109	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	41.7	83	50	45.7	91	9	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	41.4	83	50	45.5	91	9	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	52.2	104	50	56.1	112	7	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	49.8	100	50	52.9	106	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	55.1	110	50	62.5	125	13	40-140/20
132-64-9	Dibenzofuran	ND		50	41.4	83	50	45.0	90	8	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	48.5	97	50	50.9	102	5	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	45.0	90	50	47.7	95	6	40-140/20
84-66-2	Diethyl phthalate	ND		50	46.2	92	50	49.3	99	6	40-140/20
131-11-3	Dimethyl phthalate	ND		50	47.1	94	50	51.0	102	8	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	53.9	108	50	56.8	114	5	40-140/20
118-74-1	Hexachlorobenzene	ND		50	46.1	92	50	49.1	98	6	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40145-MS	F76856.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367
OP40145-MSD	F76857.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367
MC34000-1	F76858.D	1	10/14/14	WK	10/10/14	OP40145	MSF3367

The QC reported here applies to the following samples: Method: SW846 8270D

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

7.3.1

7

CAS No.	Compound	MC34000-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	25.8	52	50	29.9	60	15	40-140/20
67-72-1	Hexachloroethane	ND		50	37.2	74	50	40.6	81	9	40-140/20
78-59-1	Isophorone	ND		50	37.4	75	50	40.9	82	9	40-140/20
88-74-4	2-Nitroaniline	ND		50	46.2	92	50	50.4	101	9	40-140/20
99-09-2	3-Nitroaniline	ND		50	43.7	87	50	48.2	96	10	40-140/20
100-01-6	4-Nitroaniline	ND		50	44.7	89	50	49.5	99	10	40-140/20
98-95-3	Nitrobenzene	ND		50	39.9	80	50	43.5	87	9	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	28.7	57	50	31.6	63	10	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.2	86	50	48.9	98	12	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	44.9	90	50	48.9	98	9	40-140/20
110-86-1	Pyridine	ND		50	11.9	24* c	50	20.1	40	51* b	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-1	Limits
367-12-4	2-Fluorophenol	48%	50%	44%	15-110%
4165-62-2	Phenol-d5	32%	35%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	102%	108%	93%	15-110%
4165-60-0	Nitrobenzene-d5	77%	84%	72%	30-130%
321-60-8	2-Fluorobiphenyl	77%	85%	71%	30-130%
1718-51-0	Terphenyl-d14	96%	102%	98%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.
(c) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40146-MS	I92195.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
OP40146-MSD	I92196.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436
MC34000-2	I92197.D	1	10/14/14	WK	10/11/14	OP40146	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8

7.3.2

7

CAS No.	Compound	MC34000-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	44.8	90	50	48.6	97	8	40-140/20
208-96-8	Acenaphthylene	ND		50	40.0	80	50	43.7	87	9	40-140/20
120-12-7	Anthracene	ND		50	47.0	94	50	49.1	98	4	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	54.0	108	50	56.4	113	4	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	51.0	102	50	53.6	107	5	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	52.4	105	50	56.3	113	7	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	51.8	104	50	53.5	107	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	50.7	101	50	51.9	104	2	40-140/20
218-01-9	Chrysene	ND		50	50.7	101	50	52.9	106	4	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	52.4	105	50	54.1	108	3	40-140/20
206-44-0	Fluoranthene	ND		50	49.6	99	50	52.6	105	6	40-140/20
86-73-7	Fluorene	ND		50	45.1	90	50	47.6	95	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	51.4	103	50	53.2	106	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	42.2	84	50	45.7	91	8	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	43.0	86	50	46.4	93	8	40-140/20
85-01-8	Phenanthrene	ND		50	48.2	96	50	50.3	101	4	40-140/20
129-00-0	Pyrene	ND		50	47.9	96	50	50.7	101	6	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-2	Limits
367-12-4	2-Fluorophenol	54%	56%	49%	15-110%
4165-62-2	Phenol-d5	36%	37%	33%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	103%	90%	15-110%
4165-60-0	Nitrobenzene-d5	87%	93%	81%	30-130%
321-60-8	2-Fluorobiphenyl	83%	90%	77%	30-130%
1718-51-0	Terphenyl-d14	97%	101%	96%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL;Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3367-CC3361	Injection Date:	10/14/14
Lab File ID:	F76834.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	68307	4.31	241298	5.36	166272	6.89	327265	8.18	444258	10.80	455860	12.53
Upper Limit [a]	136614	4.81	482596	5.86	332544	7.39	654530	8.68	888516	11.30	911720	13.03
Lower Limit [b]	34154	3.81	120649	4.86	83136	6.39	163633	7.68	222129	10.30	227930	12.03
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40134-MB	70996	4.31	241442	5.36	164978	6.89	330677	8.18	444869	10.80	463076	12.53
OP40134-BS	75792	4.31	269309	5.36	181873	6.89	363147	8.18	484236	10.80	499922	12.53
OP40134-MS	68539	4.31	240771	5.36	161769	6.89	322622	8.18	427020	10.80	435138	12.53
OP40134-MSD	70818	4.31	249003	5.36	170289	6.89	334806	8.18	450336	10.80	453881	12.53
MC33900-22	68633	4.30	235726	5.36	161903	6.89	332764	8.18	434938	10.80	455980	12.52
ZZZZZZ	70559	4.31	260837	5.36	183280	6.89	359073	8.18	489761	10.80	518144	12.54
ZZZZZZ	70152	4.30	251797	5.36	169375	6.89	342184	8.18	447864	10.80	465557	12.53
ZZZZZZ	68878	4.30	242889	5.36	164949	6.89	341116	8.18	447155	10.80	470017	12.53
ZZZZZZ	71573	4.31	257105	5.36	181203	6.89	355683	8.18	479932	10.80	486180	12.53
OP40116-MB	79556	4.30	275075	5.36	192100	6.89	393413	8.18	516404	10.79	533438	12.53
OP40116-BS	78124	4.30	280535	5.36	190621	6.89	378194	8.18	510162	10.80	508834	12.53
OP40116-MS	74089	4.30	259119	5.36	177532	6.89	351873	8.18	467879	10.80	472619	12.53
OP40116-MSD	79991	4.30	282810	5.36	192421	6.89	384049	8.18	522431	10.80	517855	12.53
MC33900-17	77504	4.30	267251	5.36	189047	6.89	380119	8.18	492954	10.79	517308	12.52
ZZZZZZ	75912	4.30	261801	5.36	183476	6.89	372843	8.18	487597	10.79	507102	12.52
ZZZZZZ	71330	4.30	250798	5.36	176593	6.89	352975	8.18	466631	10.79	478464	12.52
ZZZZZZ	76739	4.30	268024	5.36	184772	6.89	376238	8.17	491205	10.79	506117	12.52
ZZZZZZ	73869	4.30	258970	5.35	178609	6.89	363036	8.18	478144	10.79	483508	12.52
ZZZZZZ	73613	4.30	255091	5.35	176476	6.89	357293	8.18	465047	10.79	472940	12.52
OP40145-MB	72253	4.30	251796	5.35	174567	6.89	349291	8.18	454870	10.79	475234	12.52
OP40145-BS	69934	4.30	248610	5.36	169527	6.89	331339	8.18	445679	10.80	457193	12.53
OP40145-MS	67820	4.30	236949	5.36	161259	6.89	317254	8.18	431232	10.80	436739	12.52
OP40145-MSD	63602	4.30	224771	5.36	151388	6.89	298990	8.18	401736	10.79	411271	12.52
MC34000-1	67993	4.30	235683	5.35	164577	6.89	329096	8.17	426703	10.79	448268	12.52

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3368-CC3361	Injection Date:	10/15/14
Lab File ID:	F76861.D	Injection Time:	08:03
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	57384	4.28	197693	5.33	134143	6.86	258606	8.15	345651	10.76	332367	12.48
Upper Limit [a]	114768	4.78	395386	5.83	268286	7.36	517212	8.65	691302	11.26	664734	12.98
Lower Limit [b]	28692	3.78	98847	4.83	67072	6.36	129303	7.65	172826	10.26	166184	11.98

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC34198-1	71665	4.28	246385	5.33	167113	6.86	325680	8.15	402373	10.76	392931	12.48
MC34198-2	69939	4.28	243337	5.33	165599	6.86	321743	8.15	398837	10.76	396894	12.48
MC34198-3	74647	4.28	263865	5.33	180720	6.86	354191	8.15	440678	10.75	427673	12.48
MC34198-4	74003	4.28	262556	5.33	180755	6.86	355107	8.15	446471	10.75	436502	12.48
MC34198-5	75438	4.28	262637	5.33	177433	6.86	345308	8.14	433375	10.75	422218	12.48
MC34198-6	72889	4.28	253755	5.33	176721	6.86	354658	8.15	474758	10.76	461866	12.48
MC34198-7	75845	4.28	258734	5.33	174739	6.86	340112	8.15	428577	10.75	423170	12.48
MC34198-8	69757	4.28	238519	5.33	164749	6.86	327277	8.14	413982	10.75	413611	12.47
OP40171-MB	70761	4.28	244248	5.33	162690	6.86	306689	8.14	368555	10.75	334803	12.47
OP40171-BS	73499	4.28	249690	5.33	162664	6.86	306043	8.14	375768	10.75	350384	12.47
ZZZZZZ	69623	4.28	238520	5.33	159514	6.86	302652	8.14	357078	10.75	337561	12.47
ZZZZZZ	72179	4.28	248752	5.33	164796	6.86	316512	8.14	375106	10.75	355677	12.47
OP40179-MB	66740	4.28	234406	5.33	162893	6.86	326327	8.14	425832	10.75	416353	12.47
OP40179-BS	66356	4.28	236002	5.33	159795	6.86	306699	8.14	412674	10.75	398064	12.47
OP40179-MS	67759	4.28	233134	5.33	154275	6.86	294111	8.14	380377	10.75	372789	12.47
OP40179-MSD	66607	4.28	233440	5.33	155801	6.86	299697	8.14	384513	10.75	374380	12.47
MC34000-10	65921	4.28	227306	5.33	152260	6.86	298225	8.14	364025	10.75	364457	12.47
ZZZZZZ	67599	4.28	240203	5.33	172815	6.86	339608	8.14	469336	10.76	504661	12.49
ZZZZZZ	76196	4.28	260271	5.33	189518	6.86	356497	8.14	437708	10.75	425482	12.47
ZZZZZZ	70308	4.28	251615	5.33	167733	6.86	327804	8.14	404871	10.75	405864	12.47
OP40178-MB	67752	4.27	230475	5.33	148304	6.86	289753	8.14	336590	10.75	333829	12.47
OP40178-BS	66330	4.28	228868	5.33	147311	6.86	273264	8.14	325835	10.75	312580	12.47
OP40178-MS	61027	4.27	205535	5.33	142595	6.86	288847	8.14	483695	10.76	617804	12.50
OP40178-MSD	64169	4.28	220697	5.33	153650	6.86	313593	8.14	604303	10.77	647198	12.53
MC34232-6	68378	4.28	235273	5.33	160665	6.86	326479	8.15	601888	10.77	656262	12.52
OP40210-MB	83338	4.28	288296	5.33	194903	6.86	385184	8.14	517420	10.75	565205	12.48
OP40210-LB	83338	4.28	288296	5.33	194903	6.86	385184	8.14	517420	10.75	565205	12.48
OP40210-BS	80711	4.28	279186	5.33	185298	6.86	357137	8.15	477505	10.76	517400	12.48
OP40210-MS	78813	4.28	273149	5.33	177454	6.86	345532	8.15	450674	10.75	485538	12.48
OP40210-MSD	75124	4.28	256926	5.33	173898	6.86	331957	8.15	440305	10.75	464855	12.48

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3368-CC3361	Injection Date:	10/15/14
Lab File ID:	F76861.D	Injection Time:	08:03
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.2

7

Semivolatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3436-CC3427	Injection Date:	10/14/14
Lab File ID:	I92191.D	Injection Time:	08:34
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	336604	3.08	744130	4.11	426551	5.60	751521	6.86	600563	9.59	1177704	10.98
Upper Limit [a]	673208	3.58	1488260	4.61	853102	6.10	1503042	7.36	1201126	10.09	2355408	11.48
Lower Limit [b]	168302	2.58	372065	3.61	213276	5.10	375761	6.36	300282	9.09	588852	10.48
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	327252	3.08	727869	4.11	411958	5.60	715382	6.86	581369	9.59	1167878	10.98
OP40146-MB	378539	3.08	847726	4.11	484702	5.60	835683	6.86	688819	9.59	1399448	10.98
OP40146-BS	374481	3.08	845802	4.11	481262	5.61	850006	6.87	669308	9.60	1327297	10.98
OP40146-MS	331510	3.08	752028	4.11	432936	5.60	769260	6.87	629274	9.60	1275081	10.98
OP40146-MSD	345605	3.08	786284	4.11	443935	5.60	782733	6.87	616606	9.60	1218422	10.98
MC34000-2	379502	3.08	845027	4.11	480803	5.60	835370	6.86	678867	9.59	1365604	10.98
MC34198-1	344797	3.08	767505	4.11	438849	5.60	766014	6.86	621430	9.59	1261360	10.98
MC34198-2	325548	3.08	725494	4.11	424556	5.60	738283	6.86	619892	9.59	1274969	10.98
MC34198-3	384730	3.08	847049	4.11	482863	5.60	839214	6.86	683729	9.59	1366128	10.98
MC34198-4	376835	3.08	832994	4.11	477776	5.60	833845	6.86	663391	9.59	1340907	10.98
MC34198-5	373050	3.08	830897	4.11	478969	5.60	835282	6.86	671750	9.59	1337260	10.98
MC34198-6	364561	3.08	805162	4.11	456343	5.60	794829	6.87	655996	9.61	1280385	11.00
MC34198-7	370484	3.08	825563	4.11	475082	5.60	823744	6.86	676933	9.59	1346951	10.98
MC34198-8	368064	3.08	813650	4.11	470091	5.60	816936	6.86	671039	9.59	1339960	10.98
OP40163-MB	385087	3.08	852123	4.11	493764	5.60	855079	6.86	693664	9.59	1375848	10.98
OP40163-BS	357647	3.08	808566	4.11	463308	5.61	810800	6.87	640283	9.60	1260126	10.98
OP40163-MS	369446	3.08	838224	4.11	471494	5.61	833313	6.87	650745	9.60	1281147	10.99
OP40163-MSD	371272	3.08	842475	4.11	478535	5.61	837950	6.87	670167	9.61	1310738	10.99
MC34231-7	348168	3.08	779448	4.11	444784	5.60	776719	6.86	627423	9.60	1248813	10.98
ZZZZZZ	355714	3.08	794008	4.11	457600	5.60	788590	6.86	645075	9.59	1280163	10.98
ZZZZZZ	354932	3.08	790348	4.11	455611	5.60	793195	6.86	638051	9.60	1280618	10.98
ZZZZZZ	382034	3.08	849910	4.11	487162	5.60	851147	6.86	689211	9.59	1375423	10.98
ZZZZZZ	362243	3.08	804538	4.11	463495	5.60	812196	6.86	656774	9.59	1323812	10.98
ZZZZZZ	362288	3.08	766417	4.11	456863	5.61	803095	6.86	653577	9.59	1300643	10.98
ZZZZZZ	354350	3.08	780334	4.11	448177	5.60	786614	6.86	643369	9.59	1247254	10.98
ZZZZZZ	376221	3.08	825613	4.11	472160	5.61	820164	6.86	644947	9.59	1213946	10.98
ZZZZZZ	360638	3.08	808074	4.11	471880	5.60	827045	6.86	680167	9.59	1349896	10.98

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3436-CC3427	Injection Date:	10/14/14
Lab File ID:	I92191.D	Injection Time:	08:34
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.3

Semivolatile Surrogate Recovery Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34198-1	F76862.D	49	33	99	77	77	103
MC34198-2	F76863.D	40	28	95	64	62	100
MC34198-3	F76864.D	45	30	94	69	68	93
MC34198-4	F76865.D	44	30	98	72	70	98
MC34198-5	F76866.D	35	24	85	56	55	102
MC34198-6	F76867.D	48	32	102	79	78	91
MC34198-7	F76868.D	49	32	96	78	75	99
MC34198-8	F76869.D	51	34	98	83	79	103
OP40145-BS	F76855.D	50	34	102	79	79	96
OP40145-MB	F76854.D	49	32	97	76	77	97
OP40145-MS	F76856.D	48	32	102	77	77	96
OP40145-MSD	F76857.D	50	35	108	84	85	102

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34198-1	I92198.D	54	37	101	88	81	98
MC34198-2	I92199.D	45	31	97	72	68	95
MC34198-3	I92200.D	49	33	94	79	74	90
MC34198-4	I92201.D	49	32	97	81	76	95
MC34198-5	I92202.D	40	27	83	64	60	99
MC34198-6	I92203.D	54	36	101	89	83	93
MC34198-7	I92204.D	53	35	97	87	80	94
MC34198-8	I92205.D	57	38	99	92	84	98
OP40146-BS	I92194.D	55	36	97	89	84	97
OP40146-MB	I92193.D	54	36	92	87	83	95
OP40146-MS	I92195.D	54	36	98	87	83	97
OP40146-MSD	I92196.D	56	37	103	93	90	101

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.2

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-MB	BB59881.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-10

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	100%	36-173%

Blank Spike Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-BS	BB59882.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.093	131	60-140
106-93-4	1,2-Dibromoethane	0.071	0.077	108	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	102%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-MS	BB59883.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
OP40168-MSD	BB59884.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
MC34231-7	BB59885.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34198-1, MC34198-2, MC34198-3, MC34198-4, MC34198-5, MC34198-6, MC34198-7, MC34198-8, MC34198-10

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0677	0.081	120	0.0688	0.079	115	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0677	0.082	121	0.0688	0.083	121	1	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
460-00-4	Bromofluorobenzene (S)	78%	80%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	123%	122%	121%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34198-1	BB59896.D	86	105
MC34198-2	BB59897.D	90	106
MC34198-3	BB59898.D	85	95
MC34198-4	BB59899.D	82	89
MC34198-5	BB59900.D	93	103
MC34198-6	BB59901.D	90	143
MC34198-7	BB59903.D	87	95
MC34198-8	BB59904.D	83	91
MC34198-10	BB59905.D	84	93
OP40168-BS	BB59882.D	102	101
OP40168-MB	BB59881.D	98	100
OP40168-MS	BB59883.D	78	123
OP40168-MSD	BB59884.D	80	122

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3333-ICC3333	Injection Date:	10/13/14
Lab File ID:	BB59877.D	Injection Time:	08:37
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40168-MB	BB59881.D	10/13/14	09:49	3.45	3.46
OP40168-BS	BB59882.D	10/13/14	10:07	3.45	3.46
OP40168-MS	BB59883.D	10/13/14	10:24	3.45	3.46
OP40168-MSD	BB59884.D	10/13/14	10:42	3.45	3.46
MC34231-7	BB59885.D	10/13/14	11:00	3.45	3.46
ZZZZZZ	BB59886.D	10/13/14	11:18	3.45	3.46
ZZZZZZ	BB59887.D	10/13/14	11:36	3.45	3.46
ZZZZZZ	BB59888.D	10/13/14	11:54	3.45	3.46
ZZZZZZ	BB59889.D	10/13/14	12:12	3.45	3.46
ZZZZZZ	BB59890.D	10/13/14	12:30	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3333-CC3333	Injection Date:	10/13/14
Lab File ID:	BB59891.D	Injection Time:	12:48
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB59892.D	10/13/14	13:06	3.45	3.46
ZZZZZZ	BB59893.D	10/13/14	13:24	3.45	3.46
ZZZZZZ	BB59894.D	10/13/14	13:42	3.45	3.46
ZZZZZZ	BB59895.D	10/13/14	14:01	3.45	3.46
MC34198-1	BB59896.D	10/13/14	14:19	3.45	3.46
MC34198-2	BB59897.D	10/13/14	14:37	3.45	3.46
MC34198-3	BB59898.D	10/13/14	14:55	3.45	3.46
MC34198-4	BB59899.D	10/13/14	15:14	3.45	3.46
MC34198-5	BB59900.D	10/13/14	15:32	3.45	3.46
MC34198-6	BB59901.D	10/13/14	15:50	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

GC Surrogate Retention Time Summary

Job Number: MC34198
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3333-CC3333	Injection Date:	10/13/14
Lab File ID:	BB59902.D	Injection Time:	16:09
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34198-7	BB59903.D	10/13/14	16:27	3.45	3.46
MC34198-8	BB59904.D	10/13/14	16:46	3.45	3.46
MC34198-10	BB59905.D	10/13/14	17:04	3.45	3.46
GBB3333-ECC333B	BB59906.D	10/13/14	17:23	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34231

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/11/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW3-ROX-100914-EB	MW3-ROX-100914
ROST3MW-ROX-100914	ROST4PZC-ROX-100914
TB-ROX-100914-HCL	TB-ROX-100914-ST
MW5-ROX-100914	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated SVOCs and PAHs were detected in the method blank, and although not indicated in the laboratory case narrative, VOCs were detected in the equipment blank. VOC and SVOC LCS recoveries were outside evaluation criteria. VOC, and SVOC MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria in sample MW5-ROX-100914. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for vinyl acetate exceeded 30 percent difference (%D). Also, the continuing calibration verification for vinyl acetate exceeded 40%D.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.9ºC and 0.6°C, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
MW3-ROX-100914-EB	VOCs	o-Xylene	0.76 µg/L
MW3-ROX-100914-EB	VOCs	Xylene (total)	0.76 µg/L
OP40162-MB	SVOCs	Di-n-butyl phthalate	0.21 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
OP40163-MB	PAHs	Phenanthrene	0.026 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification. Please see Section 12.0 of this review for additional qualifications regarding samples associated with the equipment blank.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW3-ROX-100914	VOCs	Xylene (total)	-	**U**
MW3-ROX-100914	SVOCs	Di-n-butyl phthalate	-	**U**
ROST3MW-ROX-100914	SVOCs	Di-n-butyl phthalate	-	**U**
ROST4PZC-ROX-100914	SVOCs	Di-n-butyl phthalate	-	**U**
ROST4PZC-ROX-100914	PAHs	Phenanthrene	0.088 µg/L	**U**
MW5-ROX-100914	SVOCs	Di-n-butyl phthalate	-	**U**
MW5-ROX-100914	PAHs	Phenanthrene	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSN3381-BS	VOCs	Acetone	**68**	70-130
MSL3916-BS	VOCs	Acetone	**63**	70-130
MSL3916-BS	VOCs	Dichlorodifluoromethane	**64**	70-130
MSL3916-BS	VOCs	1,4-Dioxane	**190**	70-130
MSL3916-BS	VOCs	2-Hexanone	**63**	70-130
MSL3916-BS	VOCs	Vinyl acetate	**178**	70-130
OP40162-BS	SVOCs	Pyridine	**31**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSN3381-BS was associated with the trip blank and equipment blank, and LCS OP40162-BS was also associated with the equipment blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-100914	VOCs	Acetone	**UJ**
ROST3MW-ROX-100914	VOCs	Acetone	**UJ**
ROST4PZC-ROX-100914	VOCs	Acetone	**UJ**
MW5-ROX-100914	VOCs	Acetone	**UJ**
MW5-ROX-100914	VOCs	Dichlorodifluoromethane	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW5-ROX-100914	VOCs	2-Hexanone	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW5-ROX-100914 was spiked and analyzed for VOCs, SVOCs, and PAHs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW5-ROX-100914	VOCs	Acetone	**31/27**	13	70-130/30
MW5-ROX-100914	VOCs	Acrolein	120/**60**	**67**	70-130/30
MW5-ROX-100914	VOCs	Bromomethane	130/84	**43**	70-130/30
MW5-ROX-100914	VOCs	2-Butanone (MEK)	80/**55**	**37**	70-130/30
MW5-ROX-100914	VOCs	Chloroethane	**140**/72	**64**	70-130/30
MW5-ROX-100914	VOCs	2-Chloroethyl vinyl ether	**132**/91	**37**	70-130/30
MW5-ROX-100914	VOCs	Chloromethane	127/78	**47**	70-130/30
MW5-ROX-100914	VOCs	Dichlorodifluoromethane	87/**46**	**62**	70-130/30
MW5-ROX-100914	VOCs	2,2-Dichloropropane	**135**/104	26	70-130/30
MW5-ROX-100914	VOCs	2-Hexanone	**52/42**	21	70-130/30
MW5-ROX-100914	VOCs	4-Methyl-2-pentanone (MIBK)	86/**68**	24	70-130/30
MW5-ROX-100914	VOCs	Tetrachloroethene	84/**69**	20	70-130/30
MW5-ROX-100914	VOCs	Tetrachlorofluoromethane	126/**62**	**68**	70-130/30
MW5-ROX-100914	VOCs	Vinyl acetate	**240/200**	18	70-130/30
MW5-ROX-100914	VOCs	Vinyl chloride	107/**56**	**63**	70-130/30
MW5-ROX-100914	VOCs	m,p-Xylene	82/**68**	18	70-130/30
MW5-ROX-100914	SVOCs	3,3'-Dichlorobenzidine	**11/5**	**74**	40-140/20
MW5-ROX-100914	SVOCs	Pyridine	40/**35**	16	40-140/20

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

Yes, professional judgment was also used to qualify as estimated, however not reject, the following data that was associated with equipment blank MW3-ROX-100914-EB, due to comparable historical detections.

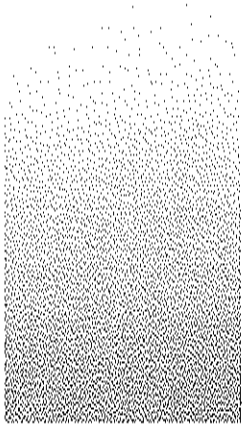
Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW5-ROX-100914	VOCs	o-Xylene	-	**J**

Additionally, the calibration check standard for vinyl acetate exceeded 40 percent difference (%D), biased low. Analytes in associated samples were qualified as summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-100914	VOCs	Vinyl acetate	**UJ**
ROST3MW-ROX-100914	VOCs	Vinyl acetate	**UJ**
ROST4PZC-ROX-100914	VOCs	Vinyl acetate	**UJ**

New England ACCUTEST LABORATORIES

10/31/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34231

Sampling Date: 10/09/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **102**

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

Reviewed on 11/11/14

Reza Pand
Lab Director

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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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34231

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34231-1	10/09/14	09:20	MMSV	10/10/14	AQ	Equipment Blank	MW3-ROX-100914-EB
MC34231-2	10/09/14	09:55	MMSV	10/10/14	AQ	Ground Water	MW3-ROX-100914
MC34231-3	10/09/14	11:05	MMSV	10/10/14	AQ	Ground Water	ROST3MW-ROX-100914
MC34231-4	10/09/14	12:45	MMSV	10/10/14	AQ	Ground Water	ROST4PZC-ROX-100914
MC34231-5	10/09/14	00:00	MMSV	10/10/14	AQ	Trip Blank Water	TB-ROX-100914-HCL
MC34231-6	10/09/14	00:00	MMSV	10/10/14	AQ	Trip Blank Water	TB-ROX-100914-ST
MC34231-7	10/09/14	14:50	MMSV	10/10/14	AQ	Ground Water	MW-5-ROX-100914
MC34231-7D	10/09/14	14:50	MMSV	10/10/14	AQ	Water Dup/MSD	MW-5-ROX-100914
MC34231-7S	10/09/14	14:50	MMSV	10/10/14	AQ	Water Matrix Spike	MW-5-ROX-100914

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34231
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	10/24/2014 3:07:20 PM

5 Sample(s) and 2 Trip Blank(s) were collected on 10/09/2014 and were received at Accutest on 10/10/2014 properly preserved, at 0.6 Deg. C and intact. These Samples received an Accutest job number of MC34231. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ **Batch ID:** MSL3916

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Chloroethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, m,p-Xylene, Tetrachloroethene, 2-Butanone (MEK), Acrolein, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acrolein, Bromomethane, Chloroethane, Chloromethane, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits for sample MC34231-7MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC34231-7MS/MSD: Elevated detection limit due to limited sample volume.
- MC34231-7MS/MSD for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- MSL3916-BS for 1,4-Dioxane, Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification standard MSL3909-ICV3872 for vinyl acetate exceed 30% difference (response biased high). Associated samples are non-detect for this compound..
- Continuing alibration standard MSL3916-CC3872 for vinyl acetate exceed 40% difference (response biased high). Associated samples are non-detect for this compound..

Matrix AQ **Batch ID:** MSN3381

- 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 Acetone are outside control limits. Blank Spike meets program technical requirements.
- MC34436-4MS/MSD for Tetrachloroethene: Outside control limits due to high level in sample relative to spike amount.
- Calibration check standard MSN3381-CC3345, file N91530 utilized the same file as MSN3385-CC3345.
- MC34436-4MS for Acetone, Chloromethane, 2-Hexanone, Methyl Tert Butyl Ether, Naphthalene, Trichloroethene, Vinyl Acetate: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC34436-4MSD for Acetone, Chloromethane, 2-Hexanone, Methyl Tert Butyl Ether, Naphthalene, Vinyl Acetate: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Calibration check standard MSN3385-CC3345, file N91530 for vinyl acetate exceed 40% difference (response biased low). Reporting limit response verified by RL verification standard. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP40162

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- Sample(s) MC34231-2, MC34231-3, MC34231-4, MC34231-7 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP40162-BS/MSD meets program technical requirements. Recovery(s) for Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP40162-MS/MSD Recovery(s) for 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 3,3'-Dichlorobenzidine are outside control limits for sample OP40162-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP40163

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- Sample(s) MC34231-3, MC34231-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40168

- 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.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.

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(MC34231).

Summary of Hits

Job Number: MC34231
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34231-1	MW3-ROX-100914-EB					
o-Xylene		0.76 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		0.76 J	1.0	0.36	ug/l	SW846 8260C
MC34231-2	MW3-ROX-100914					
Benzene		0.50	0.50	0.32	ug/l	SW846 8260C
tert-Butylbenzene		0.83 J	5.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		0.40 J	5.0	0.35	ug/l	SW846 8260C
Methyl Tert Butyl Ether		3.1	1.0	0.51	ug/l	SW846 8260C
n-Propylbenzene		0.53 J	5.0	0.49	ug/l	SW846 8260C
Toluene		0.46 J	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1.2 J	5.0	0.32	ug/l	SW846 8260C
m,p-Xylene		0.95 J	1.0	0.93	ug/l	SW846 8260C
Xylene (total)		~~0.95~~ J U	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.23~~ JB U	5.6	0.19	ug/l	SW846 8270D
MC34231-3	ROST3MW-ROX-100914					
Benzene		3.0	0.50	0.32	ug/l	SW846 8260C
Ethylbenzene		39.8	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		2.1 J	5.0	0.35	ug/l	SW846 8260C
Naphthalene		6.1	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		2.8 J	5.0	0.49	ug/l	SW846 8260C
Toluene		3.2	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		18.0	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		5.0	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		65.1	1.0	0.93	ug/l	SW846 8260C
o-Xylene		20.5	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		85.6	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.26~~ JB U	5.6	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.46 J	2.2	0.37	ug/l	SW846 8270D
1-Methylnaphthalene		0.75 J	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.57 J	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.14 B	0.056	0.014	ug/l	SW846 8270D BY SIM
MC34231-4	ROST4PZC-ROX-100914					
Benzene		39.0	0.50	0.32	ug/l	SW846 8260C
Ethylbenzene		68.8	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		1.1 J	5.0	0.35	ug/l	SW846 8260C
Naphthalene		16.9	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		1.1 J	5.0	0.49	ug/l	SW846 8260C
Toluene		19.6	1.0	0.33	ug/l	SW846 8260C

Summary of Hits

Job Number: MC34231
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,2,4-Trimethylbenzene		4.6 J	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		0.47 J	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		112	1.0	0.93	ug/l	SW846 8260C
o-Xylene		63.4	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		176	1.0	0.36	ug/l	SW846 8260C
3&4-Methylphenol		0.71 J	11	0.52	ug/l	SW846 8270D
Phenol		0.88 J	5.6	0.34	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.32~~ JB U	5.6	0.19	ug/l	SW846 8270D
Phenanthrene		~~0.088~~ B U	~~0.056~~ 0.088	0.014	ug/l	SW846 8270D BY SIM
MC34231-5	TB-ROX-100914-HCL					
No hits reported in this sample.						
MC34231-6	TB-ROX-100914-ST					
No hits reported in this sample.						
MC34231-7	MW-5-ROX-100914					
Benzene		28.0	0.50	0.32	ug/l	SW846 8260C
sec-Butylbenzene		0.83 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		4.9 J	5.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		1.2 J	5.0	0.35	ug/l	SW846 8260C
Methyl Tert Butyl Ether		19.0	1.0	0.51	ug/l	SW846 8260C
Toluene		1.5	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		0.58 J	5.0	0.32	ug/l	SW846 8260C
m,p-Xylene		2.7	1.0	0.93	ug/l	SW846 8260C
o-Xylene		1.2 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		3.9	1.0	0.36	ug/l	SW846 8260C
Phenol		0.72 J	5.4	0.33	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.23~~ JB U	5.4	0.19	ug/l	SW846 8270D
1-Methylnaphthalene		0.99 J	2.2	0.54	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.030~~ J U	0.054	0.014	ug/l	SW846 8270D BY SIM

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91424.D	1	10/21/14	TT	n/a	n/a	MSN3381
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.76	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	0.76	1.0	0.36	ug/l	J

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40300.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	81%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92211.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW3-ROX-100914-EB		
Lab Sample ID:	MC34231-1	Date Sampled:	10/09/14
Matrix:	AQ - Equipment Blank	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59890.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	97%		36-173%
460-00-4	Bromofluorobenzene (S)	107%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91426.D	1	10/21/14	TT	n/a	n/a	MSN3381
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.50	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	0.83	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.2.4

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.40	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.1	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	0.53	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	0.46	1.0	0.33	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1.2	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	0.95	1.0	0.93	ug/l	J
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	~~0.95~~ U	1.0	0.36	ug/l	J U

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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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40301.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.23~~ U	5.6	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	57%		15-110%
4165-62-2	Phenol-d5	37%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	91%		30-130%
321-60-8	2-Fluorobiphenyl	86%		30-130%
1718-51-0	Terphenyl-d14	103%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92212.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	95%		30-130%
321-60-8	2-Fluorobiphenyl	83%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW3-ROX-100914		
Lab Sample ID:	MC34231-2	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59889.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	89%		36-173%
460-00-4	Bromofluorobenzene (S)	110%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91427.D	1	10/21/14	TT	n/a	n/a	MSN3381
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U5
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	3.0	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.3

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	39.8	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	2.1	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	6.1	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	2.8	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	3.2	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	18.0	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	5.0	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	65.1	1.0	0.93	ug/l	
95-47-6	o-Xylene	20.5	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	85.6	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40302.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.26~~ U	5.6	0.19	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.46	2.2	0.37	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	92%		15-110%
4165-60-0	Nitrobenzene-d5	71%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92213.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	0.75	2.2	0.56	ug/l	J
91-57-6	2-Methylnaphthalene	0.57	2.2	0.56	ug/l	J
85-01-8	Phenanthrene	0.14	0.056	0.014	ug/l	B
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	ROST3MW-ROX-100914		
Lab Sample ID:	MC34231-3	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59888.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	118%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91428.D	1	10/21/14	TT	n/a	n/a	MSN3381
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U J
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	39.0	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	68.8	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	1.1	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	16.9	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	1.1	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	19.6	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	4.6	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	0.47	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	112	1.0	0.93	ug/l	
95-47-6	o-Xylene	63.4	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	176	1.0	0.36	ug/l	

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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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40307.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	0.71	11	0.52	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	0.88	5.6	0.34	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.32~~	5.6	0.19	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	108%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92214.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	~~0.088~~ 0.088	~~0.056~~	0.014	ug/l	B J
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	ROST4PZC-ROX-100914		
Lab Sample ID:	MC34231-4	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59887.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	116%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100914-HCL		
Lab Sample ID:	MC34231-5	Date Sampled:	10/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91423.D	1	10/21/14	TT	n/a	n/a	MSN3381
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100914-HCL		
Lab Sample ID:	MC34231-5	Date Sampled:	10/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100914-HCL		
Lab Sample ID:	MC34231-5	Date Sampled:	10/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-100914-ST		
Lab Sample ID:	MC34231-6	Date Sampled:	10/09/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59886.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	98%		36-173%
460-00-4	Bromofluorobenzene (S)	107%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	us
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	28.0	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	0.83	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	4.9	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	us
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	1.2	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	19.0	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.5	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.58	5.0	0.32	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	2.7	1.0	0.93	ug/l	
95-47-6	o-Xylene	1.2	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	3.9	1.0	0.36	ug/l	

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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:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	121%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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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:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40299.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	0.72	5.4	0.33	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.23~~ 4	5.4	0.19	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	101%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92210.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	0.99	2.2	0.54	ug/l	J
91-57-6	2-Methylnaphthalene	ND	2.2	0.54	ug/l	
85-01-8	Phenanthrene	~~0.030~~	0.054	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5-ROX-100914		
Lab Sample ID:	MC34231-7	Date Sampled:	10/09/14
Matrix:	AQ - Ground Water	Date Received:	10/10/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59885.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	89%		36-173%
460-00-4	Bromofluorobenzene (S)	121%		36-173%

ND = Not detected MDL = Method Detection Limit
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:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (.....)
☐ CALSCIENCE (Address: Calscience Caps: 405 Technology Cir W Marlborough, MA 01752 (508-481-6200))
☑ OTHER (ACCUTEST)
☐ SPL (.....)
Lab Vendor #

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOAC ☐ CONSULTANT ☐ URS
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 A A A 0
BAP #: 3 4 0 0 0 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10-9-14
PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Project Contact (name & e-mail): Elizabeth Kunkel, Woody Pennington, Bob Billman, Lindsay Hathaway

Telephone: 314-429-0100 Fax: 314-429-0462

Turnaround Time (Call Prior to Lab): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ EDF - RWQCB REPORT FORMAT ☐ OTHER (SPECIFY)

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

Temperature on Receipt C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ DO NOT BILL
☑ RECEIPT VERIFICATION REQUESTED
☐ REQUIRE LEVEL 4 DATA

Site Address (Street and City): 900 South Central Ave, ROXANA
Site #: Global ID:
EDF Deliverable to (Consultant Company Name & Address): Report to:
Email: Roxana Quarterly GW / 21582973.03004
Invoice to:
Melissa Manster, Stefanie Voss
LAB USE ONLY: MC34231

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Temperature on Receipt C° / Container PID Readings or Laboratory Notes
-1	MW3-ROX-100914 EB	10/9/14	0930	water	2			2	2	6	X	X	X	X	0.0	
-2	MW3-ROX-100914		0955		2			2	2	6	X	X	X	X		
-3	ROST3MW-ROX-100914		1105		2			2	2	6	X	X	X	X		
-4	ROST4FD-ROX-100914		1245		2			2	2	6	X	X	X	X		
-5	TB-ROX-100914 HCL		0000		2					2	X					
-6	TB-ROX-100914 STL		0000						2	2		X				
-7	MW5-ROX-100914		1450		2			2	2	6	X	X	X	X		18B, 2E1,
-7S	MW5-ROX-100914 MS		1450		0			2	2	6	X	X	X	X		
-7D	MW5-ROX-100914 MSD		1450		2			2	2	6	X	X	X	X	✓	

Relinquished by (Signature): Stefanie Voss — Received by (Signature): FED EX — Date: 10-9-14 — Time: 1800
Relinquished by (Signature): FEDX — Received by (Signature): [signature] — Date: 10-10-14 — Time: 930
Relinquished by (Signature): — Received by (Signature): — Date: — Time:

0.6 -0.9 °C

5.1 G

MC34231: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34231 Client: URS Project: 900 SOUTH CENTRAL

Date / Time Received: 10/10/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (0.6/0.6); #2: (0.9/0.9);

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. Thermometer ID:	01;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	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

5.1

MC34231: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34231

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34231-1 Collected: 09-OCT-14 09:20 By: MMSV Received: 10-OCT-14 By: MW3-ROX-100914-EB						
MC34231-1	SW846 8011	13-OCT-14 12:30	NK	12-OCT-14	MT	V8011SL
MC34231-1	SW846 8270D	14-OCT-14 11:16	WK	11-OCT-14	PA	AB8270SL+
MC34231-1	SW846 8270D BY SIM	14-OCT-14 16:08	WK	11-OCT-14	PA	B8270SIMSL
MC34231-1	SW846 8260C	21-OCT-14 11:12	TT			V8260SL+
MC34231-2 Collected: 09-OCT-14 09:55 By: MMSV Received: 10-OCT-14 By: MW3-ROX-100914						
MC34231-2	SW846 8011	13-OCT-14 12:12	NK	12-OCT-14	MT	V8011SL
MC34231-2	SW846 8270D	14-OCT-14 11:40	WK	11-OCT-14	PA	AB8270SL+
MC34231-2	SW846 8270D BY SIM	14-OCT-14 16:31	WK	11-OCT-14	PA	B8270SIMSL
MC34231-2	SW846 8260C	21-OCT-14 12:08	TT			V8260SL+
MC34231-3 Collected: 09-OCT-14 11:05 By: MMSV Received: 10-OCT-14 By: ROST3MW-ROX-100914						
MC34231-3	SW846 8011	13-OCT-14 11:54	NK	12-OCT-14	MT	V8011SL
MC34231-3	SW846 8270D	14-OCT-14 12:05	WK	11-OCT-14	PA	AB8270SL+
MC34231-3	SW846 8270D BY SIM	14-OCT-14 16:53	WK	11-OCT-14	PA	B8270SIMSL
MC34231-3	SW846 8260C	21-OCT-14 12:36	TT			V8260SL+
MC34231-4 Collected: 09-OCT-14 12:45 By: MMSV Received: 10-OCT-14 By: ROST4PZC-ROX-100914						
MC34231-4	SW846 8011	13-OCT-14 11:36	NK	12-OCT-14	MT	V8011SL
MC34231-4	SW846 8270D	14-OCT-14 14:07	WK	11-OCT-14	PA	AB8270SL+
MC34231-4	SW846 8270D BY SIM	14-OCT-14 17:16	WK	11-OCT-14	PA	B8270SIMSL
MC34231-4	SW846 8260C	21-OCT-14 13:05	TT			V8260SL+
MC34231-5 Collected: 09-OCT-14 00:00 By: MMSV Received: 10-OCT-14 By: TB-ROX-100914-HCL						
MC34231-5	SW846 8260C	21-OCT-14 10:43	TT			V8260SL+
MC34231-6 Collected: 09-OCT-14 00:00 By: MMSV Received: 10-OCT-14 By: TB-ROX-100914-ST						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34231

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34231-6	SW846 8011	13-OCT-14 11:18	NK	12-OCT-14	MT	V8011SL
MC34231-7 Collected: 09-OCT-14 14:50 By: MMSV Received: 10-OCT-14 By: MW-5-ROX-100914						
MC34231-7	SW846 8011	13-OCT-14 11:00	NK	12-OCT-14	MT	V8011SL
MC34231-7	SW846 8270D	14-OCT-14 10:51	WK	11-OCT-14	PA	AB8270SL+
MC34231-7	SW846 8270D BY SIM	14-OCT-14 15:46	WK	11-OCT-14	PA	B8270SIMSL
MC34231-7	SW846 8260C	23-OCT-14 16:16	GK			V8260SL+

Accutest Internal Chain of Custody

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34231-1.2	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-1.2	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-1.4	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-1.6	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-1.6	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-1.6	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-1.6	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-2.2	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-2.2	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-2.3	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-2.5	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-2.5	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-2.5	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-2.5	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-3.1	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-3.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-3.3	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-3.5	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-3.5	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-3.5	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-3.5	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-4.1	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-4.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-4.3	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-4.5	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-4.5	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-4.5	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-4.5	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-5.1	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-5.1	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-5.1	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-5.1	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34231-6.1	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-7.1	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-7.1	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-7.4	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-7.4	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-7.6	Walk In Ref #22	Alireza Zeighami	10/11/14 07:59	Retrieve from Storage
MC34231-7.6	Alireza Zeighami		10/14/14 07:27	Depleted
MC34231-7.7	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-7.8	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-7.12	VOC Ref #2	Marc Tahtamoni	10/12/14 18:46	Retrieve from Storage
MC34231-7.13	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34231-7.13	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34231-7.13	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34231-7.13	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34231-7.14	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34231-7.14	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34231-7.14	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34231-7.14	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34231-7.15	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:32	Retrieve from Storage
MC34231-7.15	Jaclyn Bergeron	GCMSN	10/21/14 09:32	Load on Instrument
MC34231-7.15	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-7.15	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-7.16	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:33	Retrieve from Storage
MC34231-7.16	Jaclyn Bergeron	GCMSN	10/21/14 09:33	Load on Instrument
MC34231-7.16	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-7.16	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-7.17	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:33	Retrieve from Storage
MC34231-7.17	Jaclyn Bergeron	GCMSN	10/21/14 09:33	Load on Instrument
MC34231-7.17	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-7.17	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage
MC34231-7.18	VOC Ref #2	Jaclyn Bergeron	10/21/14 09:33	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/10/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34231-7.18	Jaclyn Bergeron	GCMSN	10/21/14 09:33	Load on Instrument
MC34231-7.18	GCMSN	Jaclyn Bergeron	10/22/14 09:48	Unload from Instrument
MC34231-7.18	Jaclyn Bergeron	VOC Ref #2	10/22/14 09:48	Return to Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

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: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB	N91422.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB	N91422.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB	N91422.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	117%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB1	N91533.D	1	10/24/14	TT	n/a	n/a	MSN3381

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

MC34436-4MS, MC34436-4MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.34	ug/l	
75-25-2	Bromoform	ND	2.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.43	ug/l	
75-00-3	Chloroethane	ND	5.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	2.0	0.41	ug/l	
74-87-3	Chloromethane	ND	5.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB1	N91533.D	1	10/24/14	TT	n/a	n/a	MSN3381

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

MC34436-4MS, MC34436-4MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	0.59	ug/l	
108-88-3	Toluene	ND	2.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	2.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	2.0	0.58	ug/l	
	m,p-Xylene	ND	2.0	0.93	ug/l	
95-47-6	o-Xylene	ND	2.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.36	ug/l	

6.1.3

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-MB1	N91533.D	1	10/24/14	TT	n/a	n/a	MSN3381

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

MC34436-4MS, MC34436-4MSD

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	103%	70-130%

6.1.3

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-BS	N91419.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	33.9	68* a	70-130
107-02-8	Acrolein	250	254	102	70-130
107-13-1	Acrylonitrile	50	49.0	98	70-130
71-43-2	Benzene	50	47.8	96	70-130
108-86-1	Bromobenzene	50	56.1	112	70-130
74-97-5	Bromochloromethane	50	53.2	106	70-130
75-27-4	Bromodichloromethane	50	54.3	109	70-130
75-25-2	Bromoform	50	57.8	116	70-130
74-83-9	Bromomethane	50	58.8	118	70-130
78-93-3	2-Butanone (MEK)	50	47.9	96	70-130
104-51-8	n-Butylbenzene	50	61.1	122	70-130
135-98-8	sec-Butylbenzene	50	59.3	119	70-130
98-06-6	tert-Butylbenzene	50	56.9	114	70-130
75-15-0	Carbon disulfide	50	45.4	91	70-130
56-23-5	Carbon tetrachloride	50	54.6	109	70-130
108-90-7	Chlorobenzene	50	53.6	107	70-130
75-00-3	Chloroethane	50	60.9	122	70-130
110-75-8	2-Chloroethyl vinyl ether	50	58.1	116	70-130
67-66-3	Chloroform	50	48.5	97	70-130
74-87-3	Chloromethane	50	50.2	100	70-130
95-49-8	o-Chlorotoluene	50	55.7	111	70-130
106-43-4	p-Chlorotoluene	50	55.3	111	70-130
124-48-1	Dibromochloromethane	50	57.9	116	70-130
95-50-1	1,2-Dichlorobenzene	50	59.7	119	70-130
541-73-1	1,3-Dichlorobenzene	50	57.0	114	70-130
106-46-7	1,4-Dichlorobenzene	50	60.7	121	70-130
75-71-8	Dichlorodifluoromethane	50	52.0	104	70-130
75-34-3	1,1-Dichloroethane	50	48.8	98	70-130
107-06-2	1,2-Dichloroethane	50	46.4	93	70-130
75-35-4	1,1-Dichloroethene	50	52.4	105	70-130
156-59-2	cis-1,2-Dichloroethene	50	49.7	99	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.0	98	70-130
78-87-5	1,2-Dichloropropane	50	57.3	115	70-130
142-28-9	1,3-Dichloropropane	50	57.5	115	70-130
594-20-7	2,2-Dichloropropane	50	54.6	109	70-130
563-58-6	1,1-Dichloropropene	50	58.5	117	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-BS	N91419.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	58.4	117	70-130
10061-02-6	trans-1,3-Dichloropropene	50	60.4	121	70-130
123-91-1	1,4-Dioxane	125	138	110	70-130
97-63-2	Ethyl methacrylate	50	52.9	106	77-137
100-41-4	Ethylbenzene	50	55.2	110	70-130
87-68-3	Hexachlorobutadiene	50	62.4	125	70-130
591-78-6	2-Hexanone	50	48.9	98	70-130
98-82-8	Isopropylbenzene	50	57.6	115	70-130
99-87-6	p-Isopropyltoluene	50	60.4	121	70-130
1634-04-4	Methyl Tert Butyl Ether	50	40.9	82	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.7	97	70-130
74-95-3	Methylene bromide	50	52.7	105	70-130
75-09-2	Methylene chloride	50	47.5	95	70-130
91-20-3	Naphthalene	50	62.8	126	70-130
103-65-1	n-Propylbenzene	50	58.4	117	70-130
100-42-5	Styrene	50	61.6	123	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.4	115	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	59.0	118	70-130
127-18-4	Tetrachloroethene	50	56.3	113	70-130
108-88-3	Toluene	50	51.2	102	70-130
87-61-6	1,2,3-Trichlorobenzene	50	60.6	121	70-130
120-82-1	1,2,4-Trichlorobenzene	50	63.0	126	70-130
71-55-6	1,1,1-Trichloroethane	50	57.8	116	70-130
79-00-5	1,1,2-Trichloroethane	50	50.6	101	70-130
79-01-6	Trichloroethene	50	48.2	96	70-130
75-69-4	Trichlorofluoromethane	50	48.4	97	70-130
96-18-4	1,2,3-Trichloropropane	50	54.4	109	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.0	104	70-130
108-67-8	1,3,5-Trimethylbenzene	50	50.6	101	70-130
108-05-4	Vinyl Acetate	50	47.5	95	70-130
75-01-4	Vinyl chloride	50	57.6	115	70-130
	m,p-Xylene	100	105	105	70-130
95-47-6	o-Xylene	50	54.5	109	70-130
1330-20-7	Xylene (total)	150	160	107	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3381-BS	N91419.D	1	10/21/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

6.2.1

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.3	63* a	70-130
107-02-8	Acrolein	250	176	70	70-130
107-13-1	Acrylonitrile	50	38.5	77	70-130
71-43-2	Benzene	50	42.8	86	70-130
108-86-1	Bromobenzene	50	44.3	89	70-130
74-97-5	Bromochloromethane	50	41.8	84	70-130
75-27-4	Bromodichloromethane	50	46.3	93	70-130
75-25-2	Bromoform	50	38.5	77	70-130
74-83-9	Bromomethane	50	45.7	91	70-130
78-93-3	2-Butanone (MEK)	50	40.5	81	70-130
104-51-8	n-Butylbenzene	50	52.0	104	70-130
135-98-8	sec-Butylbenzene	50	48.7	97	70-130
98-06-6	tert-Butylbenzene	50	50.9	102	70-130
75-15-0	Carbon disulfide	50	39.8	80	70-130
56-23-5	Carbon tetrachloride	50	42.3	85	70-130
108-90-7	Chlorobenzene	50	39.3	79	70-130
75-00-3	Chloroethane	50	49.8	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.0	72	70-130
67-66-3	Chloroform	50	49.4	99	70-130
74-87-3	Chloromethane	50	50.8	102	70-130
95-49-8	o-Chlorotoluene	50	49.6	99	70-130
106-43-4	p-Chlorotoluene	50	48.0	96	70-130
124-48-1	Dibromochloromethane	50	45.2	90	70-130
95-50-1	1,2-Dichlorobenzene	50	43.1	86	70-130
541-73-1	1,3-Dichlorobenzene	50	42.8	86	70-130
106-46-7	1,4-Dichlorobenzene	50	41.2	82	70-130
75-71-8	Dichlorodifluoromethane	50	32.2	64* a	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	45.2	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	70-130
156-60-5	trans-1,2-Dichloroethene	50	42.9	86	70-130
78-87-5	1,2-Dichloropropane	50	42.0	84	70-130
142-28-9	1,3-Dichloropropane	50	39.2	78	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	45.8	92	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.2	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	43.6	87	70-130
123-91-1	1,4-Dioxane	125	238	190* b	70-130
97-63-2	Ethyl methacrylate	50	40.1	80	77-137
100-41-4	Ethylbenzene	50	39.8	80	70-130
87-68-3	Hexachlorobutadiene	50	41.3	83	70-130
591-78-6	2-Hexanone	50	31.7	63* a	70-130
98-82-8	Isopropylbenzene	50	49.2	98	70-130
99-87-6	p-Isopropyltoluene	50	46.0	92	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.2	88	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	36.4	73	70-130
74-95-3	Methylene bromide	50	39.6	79	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	51.8	104	70-130
103-65-1	n-Propylbenzene	50	50.3	101	70-130
100-42-5	Styrene	50	42.4	85	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	41.7	83	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	43.6	87	70-130
127-18-4	Tetrachloroethene	50	40.4	81	70-130
108-88-3	Toluene	50	43.2	86	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.0	84	70-130
120-82-1	1,2,4-Trichlorobenzene	50	43.8	88	70-130
71-55-6	1,1,1-Trichloroethane	50	50.2	100	70-130
79-00-5	1,1,2-Trichloroethane	50	41.1	82	70-130
79-01-6	Trichloroethene	50	40.8	82	70-130
75-69-4	Trichlorofluoromethane	50	43.8	88	70-130
96-18-4	1,2,3-Trichloropropane	50	47.8	96	70-130
95-63-6	1,2,4-Trimethylbenzene	50	48.3	97	70-130
108-67-8	1,3,5-Trimethylbenzene	50	45.6	91	70-130
108-05-4	Vinyl Acetate	50	88.8	178* b	70-130
75-01-4	Vinyl chloride	50	37.8	76	70-130
	m,p-Xylene	100	78.0	78	70-130
95-47-6	o-Xylene	50	41.0	82	70-130
1330-20-7	Xylene (total)	150	119	79	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	78.1	31* [b]	250	68.6	27* [b]	13	70-130/30
107-02-8	Acrolein	ND		1250	1500	120	1250	748	60* [b]	67* [c]	70-130/30
107-13-1	Acrylonitrile	ND		250	217	87	250	177	71	20	70-130/30
71-43-2	Benzene	28.0		250	268	96	250	230	81	15	70-130/30
108-86-1	Bromobenzene	ND		250	259	104	250	212	85	20	70-130/30
74-97-5	Bromochloromethane	ND		250	246	98	250	213	85	14	70-130/30
75-27-4	Bromodichloromethane	ND		250	269	108	250	228	91	16	70-130/30
75-25-2	Bromoform	ND		250	211	84	250	179	72	16	70-130/30
74-83-9	Bromomethane	ND		250	326	130	250	210	84	43* [c]	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	200	80	250	137	55* [b]	37* [c]	70-130/30
104-51-8	n-Butylbenzene	ND		250	283	113	250	237	95	18	70-130/30
135-98-8	sec-Butylbenzene	0.83	J	250	279	111	250	231	92	19	70-130/30
98-06-6	tert-Butylbenzene	4.9	J	250	294	116	250	247	97	17	70-130/30
75-15-0	Carbon disulfide	ND		250	222	89	250	185	74	18	70-130/30
56-23-5	Carbon tetrachloride	ND		250	241	96	250	193	77	22	70-130/30
108-90-7	Chlorobenzene	ND		250	207	83	250	175	70	17	70-130/30
75-00-3	Chloroethane	ND		250	350	140* [b]	250	180	72	64* [c]	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	329	132* [b]	250	227	91	37* [c]	70-130/30
67-66-3	Chloroform	ND		250	285	114	250	228	91	22	70-130/30
74-87-3	Chloromethane	ND		250	318	127	250	196	78	47* [c]	70-130/30
95-49-8	o-Chlorotoluene	ND		250	287	115	250	231	92	22	70-130/30
106-43-4	p-Chlorotoluene	ND		250	282	113	250	228	91	21	70-130/30
124-48-1	Dibromochloromethane	ND		250	236	94	250	197	79	18	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	244	98	250	195	78	22	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	245	98	250	201	80	20	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	199	80	18	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	218	87	250	115	46* [b]	62* [c]	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	280	112	250	230	92	20	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	283	113	250	248	99	13	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	253	101	250	200	80	23	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	259	104	250	219	88	17	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	249	100	250	204	82	20	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	245	98	250	208	83	16	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	210	84	250	174	70	19	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	338	135* [b]	250	261	104	26	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	264	106	250	210	84	23	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

6.3.1

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

MC34231-7

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	255	102	250	212	85	18	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	262	105	250	213	85	21	70-130/30
123-91-1	1,4-Dioxane	ND		625	561	90	625	492	79	13	70-130/30
97-63-2	Ethyl methacrylate	ND		250	241	96	250	195	78	21	72-139/30
100-41-4	Ethylbenzene	ND		250	214	86	250	176	70	19	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	227	91	250	194	78	16	70-130/30
591-78-6	2-Hexanone	ND		250	129	52* b	250	105	42* b	21	70-130/30
98-82-8	Isopropylbenzene	1.2	J	250	283	113	250	231	92	20	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	263	105	250	221	88	17	70-130/30
1634-04-4	Methyl Tert Butyl Ether	19.0		250	272	101	250	226	83	18	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	216	86	250	170	68* b	24	70-130/30
74-95-3	Methylene bromide	ND		250	235	94	250	194	78	19	70-130/30
75-09-2	Methylene chloride	ND		250	239	96	250	201	80	17	70-130/30
91-20-3	Naphthalene	ND		250	284	114	250	256	102	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	250	240	96	19	70-130/30
100-42-5	Styrene	ND		250	223	89	250	191	76	15	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	228	91	250	194	78	16	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	250	210	84	19	70-130/30
127-18-4	Tetrachloroethene	ND		250	210	84	250	172	69* b	20	70-130/30
108-88-3	Toluene	1.5		250	250	99	250	204	81	20	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	234	94	250	202	81	15	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	244	98	250	208	83	16	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	284	114	250	223	89	24	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	242	97	250	202	81	18	70-130/30
79-01-6	Trichloroethene	ND		250	225	90	250	191	76	16	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	314	126	250	155	62* b	68* c	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	250	229	92	20	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.58	J	250	273	109	250	225	90	19	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	264	106	250	215	86	20	70-130/30
108-05-4	Vinyl Acetate	ND		250	599	240* d	250	501	200* d	18	70-130/30
75-01-4	Vinyl chloride	ND		250	268	107	250	139	56* b	63* c	70-130/30
	m,p-Xylene	2.7		500	414	82	500	344	68* b	18	70-130/30
95-47-6	o-Xylene	1.2		250	216	86	250	184	73	16	70-130/30
1330-20-7	Xylene (total)	3.9		750	630	83	750	528	70	18	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34231-7

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
1868-53-7	Dibromofluoromethane	106%	110%	108%	70-130%
2037-26-5	Toluene-D8	103%	105%	105%	70-130%
460-00-4	4-Bromofluorobenzene	123%	122%	121%	70-130%

(a) Elevated detection limit due to limited sample volume.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.
(d) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34436-4MS	N91537.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4MSD	N91538.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4	N91534.D	5	10/24/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	MC34436-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	116	46* [a]	250	117	47* [a]	1	70-130/30
107-02-8	Acrolein	ND		1250	1270	102	1250	1310	105	3	70-130/30
107-13-1	Acrylonitrile	ND		250	222	89	250	229	92	3	70-130/30
71-43-2	Benzene	ND		250	231	92	250	237	95	3	70-130/30
108-86-1	Bromobenzene	ND		250	261	104	250	274	110	5	70-130/30
74-97-5	Bromochloromethane	ND		250	259	104	250	266	106	3	70-130/30
75-27-4	Bromodichloromethane	ND		250	229	92	250	236	94	3	70-130/30
75-25-2	Bromoform	ND		250	234	94	250	241	96	3	70-130/30
74-83-9	Bromomethane	ND		250	231	92	250	237	95	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	185	74	250	200	80	8	70-130/30
104-51-8	n-Butylbenzene	ND		250	274	110	250	282	113	3	70-130/30
135-98-8	sec-Butylbenzene	ND		250	277	111	250	283	113	2	70-130/30
98-06-6	tert-Butylbenzene	ND		250	258	103	250	262	105	2	70-130/30
75-15-0	Carbon disulfide	ND		250	259	104	250	267	107	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	219	88	250	225	90	3	70-130/30
108-90-7	Chlorobenzene	ND		250	245	98	250	251	100	2	70-130/30
75-00-3	Chloroethane	ND		250	305	122	250	311	124	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	271	108	250	278	111	3	70-130/30
67-66-3	Chloroform	ND		250	221	88	250	226	90	2	70-130/30
74-87-3	Chloromethane	ND		250	337	135* [a]	250	342	137* [a]	1	70-130/30
95-49-8	o-Chlorotoluene	ND		250	260	104	250	266	106	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	255	102	250	261	104	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	235	94	250	245	98	4	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	266	106	250	269	108	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	259	104	250	267	107	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	281	112	250	287	115	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	176	70	250	180	72	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	233	93	250	237	95	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	190	76	250	197	79	4	70-130/30
75-35-4	1,1-Dichloroethene	7.1		250	300	117	250	301	118	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	390		250	590	80	250	597	83	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	4.8		250	249	98	250	267	105	7	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	268	107	250	274	110	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	248	99	250	258	103	4	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	210	84	250	225	90	7	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	268	107	250	283	113	5	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34436-4MS	N91537.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4MSD	N91538.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4	N91534.D	5	10/24/14	TT	n/a	n/a	MSN3381

6.3.2

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Compound	MC34436-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	266	106	250	272	109	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	259	104	250	271	108	5	70-130/30
123-91-1	1,4-Dioxane	ND		625	538	86	625	580	93	8	70-130/30
97-63-2	Ethyl methacrylate	ND		250	217	87	250	229	92	5	72-139/30
100-41-4	Ethylbenzene	ND		250	246	98	250	249	100	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	245	98	250	262	105	7	70-130/30
591-78-6	2-Hexanone	ND		250	129	52* [a]	250	140	56* [a]	8	70-130/30
98-82-8	Isopropylbenzene	ND		250	280	112	250	287	115	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	277	111	250	280	112	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	123	49* [a]	250	148	59* [a]	18	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	192	77	250	203	81	6	70-130/30
74-95-3	Methylene bromide	ND		250	232	93	250	244	98	5	70-130/30
75-09-2	Methylene chloride	ND		250	248	99	250	254	102	2	70-130/30
91-20-3	Naphthalene	ND		250	134	54* [a]	250	153	61* [a]	13	70-130/30
103-65-1	n-Propylbenzene	ND		250	284	114	250	288	115	1	70-130/30
100-42-5	Styrene	ND		250	271	108	250	280	112	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	236	94	250	244	98	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	282	113	250	303	121	7	70-130/30
127-18-4	Tetrachloroethene	1680		250	1560	-48* [b]	250	1600	-32* [b]	3	70-130/30
108-88-3	Toluene	ND		250	247	99	250	254	102	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	176	70	250	192	77	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	235	94	250	255	102	8	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	253	101	250	259	104	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	234	94	250	245	98	5	70-130/30
79-01-6	Trichloroethene	301		250	468	67* [a]	250	490	76	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	208	83	250	213	85	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	250	100	250	267	107	7	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	244	98	250	248	99	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	236	94	250	243	97	3	70-130/30
108-05-4	Vinyl Acetate	ND		250	111	44* [a]	250	118	47* [a]	6	70-130/30
75-01-4	Vinyl chloride	ND		250	281	112	250	282	113	0	70-130/30
	m,p-Xylene	ND		500	473	95	500	487	97	3	70-130/30
95-47-6	o-Xylene	ND		250	242	97	250	247	99	2	70-130/30
1330-20-7	Xylene (total)	ND		750	714	95	750	735	98	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34436-4MS	N91537.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4MSD	N91538.D	5	10/24/14	TT	n/a	n/a	MSN3381
MC34436-4	N91534.D	5	10/24/14	TT	n/a	n/a	MSN3381

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

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-5

CAS No.	Surrogate Recoveries	MS	MSD	MC34436-4	Limits
1868-53-7	Dibromofluoromethane	95%	95%	93%	70-130%
2037-26-5	Toluene-D8	102%	103%	102%	70-130%
460-00-4	4-Bromofluorobenzene	97%	96%	105%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3916-CC3872	Injection Date:	10/23/14
Lab File ID:	L87837.D	Injection Time:	13:18
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
Upper Limit [a]	424544	8.61	585192	9.43	303612	12.62	311574	15.16	59714	6.35
Lower Limit [b]	106136	7.61	146298	8.43	75903	11.62	77894	14.16	14929	5.35
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3916-BS	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
MSL3916-MB	190403	8.12	261904	8.93	128970	12.12	124846	14.66	22434	5.93
ZZZZZZ	182018	8.12	251932	8.93	124685	12.12	122961	14.66	24885	5.96
ZZZZZZ	208336	8.12	287887	8.93	138839	12.12	140551	14.66	31153	5.92
MC34231-7	200803	8.12	276986	8.93	141791	12.12	141148	14.66	33957	5.90
MC34231-7MS [c]	216131	8.11	292513	8.93	165287	12.11	155038	14.66	35230	5.86
MC34231-7MSD [c]	188322	8.12	254054	8.93	140069	12.12	133976	14.66	26554	5.86
ZZZZZZ	199173	8.12	283066	8.93	134920	12.12	133206	14.66	27509	5.92
ZZZZZZ	166637	8.12	236442	8.93	115318	12.12	110562	14.66	22910	5.93
ZZZZZZ	202444	8.12	282320	8.93	138421	12.12	134921	14.66	28563	5.95
ZZZZZZ	182268	8.12	260167	8.93	145036	12.12	129631	14.66	61731 [d]	5.88
ZZZZZZ	232116	8.12	336132	8.93	185445	12.12	168626	14.66	61229 [d]	5.90
ZZZZZZ	264232	8.11	374426	8.93	196834	12.12	183677	14.66	47890	5.91
ZZZZZZ	223455	8.12	311175	8.93	163831	12.12	158667	14.66	37675	5.90
ZZZZZZ	259470	8.12	355756	8.93	186647	12.12	170686	14.66	38344	5.93
ZZZZZZ	250215	8.12	347171	8.93	177440	12.12	166979	14.66	34567	5.91
ZZZZZZ	244818	8.12	337139	8.93	165096	12.12	161151	14.66	31202	5.91

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) Elevated detection limit due to limited sample volume.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3381-CC3345	Injection Date:	10/21/14
Lab File ID:	N91418.D	Injection Time:	08:19
Instrument ID:	GCMSN	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	321689	9.12	495960	9.98	272314	13.24	219602	15.79	103253	6.69
Upper Limit [a]	643378	9.62	991920	10.48	544628	13.74	439204	16.29	206506	7.19
Lower Limit [b]	160845	8.62	247980	9.48	136157	12.74	109801	15.29	51627	6.19
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3381-BS	334537	9.12	525597	9.98	272223	13.24	226267	15.79	101609	6.70
MSN3380-BS1	334537	9.12	525597	9.98	272223	13.24	226267	15.79	101609	6.70
MSN3380-MB1	295772	9.11	454163	9.99	230288	13.24	167754	15.80	84219	6.73
MSN3381-MB	295772	9.11	454163	9.99	230288	13.24	167754	15.80	84219	6.73
MC34231-5	281736	9.12	438374	9.99	221369	13.24	162283	15.80	80516	6.73
MC34231-1	282987	9.11	439648	9.99	220774	13.24	159501	15.80	91078	6.71
MC34231-2	331230	9.12	511393	9.99	247170	13.24	180829	15.79	113912	6.72
MC34231-3	339006	9.12	544253	9.99	264367	13.24	192128	15.79	105428	6.72
MC34231-4	320970	9.11	490125	9.99	242065	13.24	187043	15.79	115312	6.71
ZZZZZZ	288287	9.12	457013	9.99	225366	13.24	165018	15.80	99004	6.71
ZZZZZZ	286341	9.12	438388	9.99	218623	13.24	161098	15.80	91829	6.71
ZZZZZZ	368389	9.12	567238	9.99	300525	13.24	258928	15.80	130428	6.71
ZZZZZZ	343996	9.11	528928	9.98	300867	13.24	273538	15.80	80285	6.71
ZZZZZZ	334633	9.11	499880	9.98	245589	13.24	188418	15.80	76213	6.72
ZZZZZZ	324448	9.12	498390	9.99	243631	13.24	184859	15.79	77552	6.72
ZZZZZZ	386334	9.12	612365	9.99	328417	13.24	296998	15.80	120429	6.70
ZZZZZZ	350752	9.12	549681	9.99	265291	13.24	202181	15.79	136529	6.71
ZZZZZZ	340419	9.12	519424	9.99	255816	13.24	199594	15.80	120341	6.71

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.

6.4.2

Volatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3385-CC3345	Injection Date:	10/24/14
Lab File ID:	N91530.D	Injection Time:	09:01
Instrument ID:	GCMSN	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	429874	9.12	672461	9.99	345844	13.24	263701	15.79	123045	6.72
Upper Limit [a]	859748	9.62	1344922	10.49	691688	13.74	527402	16.29	246090	7.22
Lower Limit [b]	214937	8.62	336231	9.49	172922	12.74	131851	15.29	61523	6.22
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3381-BS1	429874	9.12	672461	9.99	345844	13.24	263701	15.79	123045	6.72
MSN3385-BS	429874	9.12	672461	9.99	345844	13.24	263701	15.79	123045	6.72
MSN3381-MB1	393628	9.12	614259	9.99	306777	13.24	210099	15.80	106063	6.78
MSN3385-MB	393628	9.12	614259	9.99	306777	13.24	210099	15.80	106063	6.78
MC34436-4	389604	9.11	603590	9.99	307356	13.24	207782	15.80	104569	6.78
MC34436-4MS	431894	9.12	685561	9.99	368277	13.24	275686	15.79	121787	6.72
MC34436-4MSD	426798	9.12	674316	9.99	363692	13.24	270386	15.79	123030	6.72
ZZZZZZ	392733	9.12	623812	9.99	306825	13.24	213272	15.80	135187	6.77
ZZZZZZ	408959	9.12	643120	9.99	321704	13.24	212493	15.80	112668	6.78
ZZZZZZ	392290	9.12	626802	9.99	306113	13.24	203048	15.80	99788	6.80
ZZZZZZ	389405	9.11	629159	9.99	310785	13.24	208623	15.79	105326	6.78
ZZZZZZ	381653	9.12	606457	9.99	304028	13.24	211152	15.80	107705	6.78
ZZZZZZ	387159	9.12	612799	9.99	306621	13.24	218245	15.79	125633	6.78
ZZZZZZ	381605	9.11	612601	9.99	311688	13.24	217179	15.79	117173	6.78
ZZZZZZ	378640	9.12	616380	9.99	304314	13.24	213202	15.79	115363	6.77
ZZZZZZ	355986	9.12	568681	9.99	285479	13.24	189787	15.80	101852	6.79
ZZZZZZ	372858	9.12	597055	9.99	295721	13.24	201932	15.80	99984	6.80
ZZZZZZ	379927	9.12	604968	9.99	293494	13.24	199174	15.79	109026	6.78

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.

6.4.3

Volatile Surrogate Recovery Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34231-1	N91424.D	97	101	102
MC34231-2	N91426.D	90	99	98
MC34231-3	N91427.D	94	104	99
MC34231-4	N91428.D	92	101	96
MC34231-5	N91423.D	97	101	99
MC34231-7	L87843.D	108	105	121
MC34231-7MS	L87844.D	106	103	123
MC34231-7MSD	L87845.D	110	105	122
MC34436-4MS	N91537.D	95	102	97
MC34436-4MSD	N91538.D	95	103	96
MSL3916-BS	L87837.D	106	103	122
MSL3916-MB	L87840.D	102	100	117
MSN3381-BS	N91419.D	96	104	93
MSN3381-MB	N91422.D	95	101	100
MSN3381-MB1	N91533.D	93	101	103

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-MB	R40295.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

7.1.1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	0.21	5.0	0.17	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-MB	R40295.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	56%	15-110%
4165-62-2	Phenol-d5	37%	15-110%
118-79-6	2,4,6-Tribromophenol	93%	15-110%
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	86%	30-130%
1718-51-0	Terphenyl-d14	108%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40163-MB	I92206.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	0.026	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	93%	30-130%
321-60-8	2-Fluorobiphenyl	85%	30-130%
1718-51-0	Terphenyl-d14	103%	30-130%

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-BS	R40296.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	20.2	40	30-130
95-57-8	2-Chlorophenol	50	41.7	83	30-130
59-50-7	4-Chloro-3-methyl phenol	50	43.9	88	30-130
120-83-2	2,4-Dichlorophenol	50	45.8	92	30-130
105-67-9	2,4-Dimethylphenol	50	40.6	81	30-130
51-28-5	2,4-Dinitrophenol	50	48.1	96	30-130
534-52-1	4,6-Dinitro-o-cresol	50	51.6	103	30-130
95-48-7	2-Methylphenol	50	35.6	71	30-130
	3&4-Methylphenol	100	69.7	70	30-130
88-75-5	2-Nitrophenol	50	46.3	93	30-130
100-02-7	4-Nitrophenol	50	21.5	43	30-130
87-86-5	Pentachlorophenol	50	43.9	88	30-130
108-95-2	Phenol	50	19.0	38	30-130
95-95-4	2,4,5-Trichlorophenol	50	47.0	94	30-130
88-06-2	2,4,6-Trichlorophenol	50	47.7	95	30-130
62-53-3	Aniline	50	29.0	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	52.8	106	40-140
85-68-7	Butyl benzyl phthalate	50	53.3	107	40-140
100-51-6	Benzyl Alcohol	50	41.9	84	40-140
91-58-7	2-Chloronaphthalene	50	51.2	102	40-140
106-47-8	4-Chloroaniline	50	42.6	85	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	46.7	93	40-140
111-44-4	bis(2-Chloroethyl)ether	50	44.8	90	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	62.3	125	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	50.0	100	40-140
122-66-7	1,2-Diphenylhydrazine	50	51.0	102	40-140
121-14-2	2,4-Dinitrotoluene	50	53.6	107	40-140
606-20-2	2,6-Dinitrotoluene	50	51.6	103	40-140
91-94-1	3,3'-Dichlorobenzidine	50	51.7	103	40-140
132-64-9	Dibenzofuran	50	47.4	95	40-140
84-74-2	Di-n-butyl phthalate	50	50.9	102	40-140
117-84-0	Di-n-octyl phthalate	50	54.4	109	40-140
84-66-2	Diethyl phthalate	50	50.8	102	40-140
131-11-3	Dimethyl phthalate	50	50.5	101	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	54.1	108	40-140
118-74-1	Hexachlorobenzene	50	53.5	107	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-BS	R40296.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	27.7	55	40-140
67-72-1	Hexachloroethane	50	39.5	79	40-140
78-59-1	Isophorone	50	42.9	86	40-140
88-74-4	2-Nitroaniline	50	49.6	99	40-140
99-09-2	3-Nitroaniline	50	46.4	93	40-140
100-01-6	4-Nitroaniline	50	47.3	95	40-140
98-95-3	Nitrobenzene	50	46.2	92	40-140
62-75-9	n-Nitrosodimethylamine	50	32.1	64	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	45.5	91	40-140
86-30-6	N-Nitrosodiphenylamine	50	46.9	94	40-140
110-86-1	Pyridine	50	15.7	31* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	55%	15-110%
4165-62-2	Phenol-d5	37%	15-110%
118-79-6	2,4,6-Tribromophenol	102%	15-110%
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	89%	30-130%
1718-51-0	Terphenyl-d14	107%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40163-BS	I92207.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	46.2	92	40-140
208-96-8	Acenaphthylene	50	41.9	84	40-140
120-12-7	Anthracene	50	47.6	95	40-140
56-55-3	Benzo(a)anthracene	50	55.2	110	40-140
50-32-8	Benzo(a)pyrene	50	52.5	105	40-140
205-99-2	Benzo(b)fluoranthene	50	53.2	106	40-140
191-24-2	Benzo(g,h,i)perylene	50	52.0	104	40-140
207-08-9	Benzo(k)fluoranthene	50	53.3	107	40-140
218-01-9	Chrysene	50	51.9	104	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.4	107	40-140
206-44-0	Fluoranthene	50	51.1	102	40-140
86-73-7	Fluorene	50	46.3	93	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	52.4	105	40-140
90-12-0	1-Methylnaphthalene	50	43.2	86	40-140
91-57-6	2-Methylnaphthalene	50	43.6	87	40-140
85-01-8	Phenanthrene	50	49.1	98	40-140
129-00-0	Pyrene	50	49.4	99	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	93%	30-130%
321-60-8	2-Fluorobiphenyl	87%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-MS	R40297.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
OP40162-MSD	R40298.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
MC34231-7	R40299.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

7.3.1

7

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		55.6	25.0	45	54.3	24.7	45	1	30-130/20
95-57-8	2-Chlorophenol	ND		55.6	41.3	74	54.3	43.5	80	5	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		55.6	46.2	83	54.3	48.1	89	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		55.6	46.2	83	54.3	49.3	91	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		55.6	43.9	79	54.3	46.5	86	6	30-130/20
51-28-5	2,4-Dinitrophenol	ND		55.6	61.8	111	54.3	62.9	116	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		55.6	59.4	107	54.3	58.0	107	2	30-130/20
95-48-7	2-Methylphenol	ND		55.6	36.0	65	54.3	37.0	68	3	30-130/20
	3&4-Methylphenol	ND		111	70.2	63	109	71.7	66	2	30-130/20
88-75-5	2-Nitrophenol	ND		55.6	46.2	83	54.3	49.2	91	6	30-130/20
100-02-7	4-Nitrophenol	ND		55.6	28.9	52	54.3	30.7	56	6	30-130/20
87-86-5	Pentachlorophenol	ND		55.6	51.8	93	54.3	51.8	95	0	30-130/20
108-95-2	Phenol	0.72	J	55.6	19.3	33	54.3	19.6	35	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		55.6	49.9	90	54.3	51.2	94	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		55.6	49.4	89	54.3	53.1	98	7	30-130/20
62-53-3	Aniline	ND		55.6	26.1	47	54.3	25.3	47	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		55.6	55.6	100	54.3	56.4	104	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		55.6	57.4	103	54.3	57.4	106	0	40-140/20
100-51-6	Benzyl Alcohol	ND		55.6	40.8	73	54.3	42.6	78	4	40-140/20
91-58-7	2-Chloronaphthalene	ND		55.6	52.3	94	54.3	54.9	101	5	40-140/20
106-47-8	4-Chloroaniline	ND		55.6	36.5	66	54.3	35.2	65	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		55.6	47.1	85	54.3	49.7	91	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		55.6	44.8	81	54.3	47.4	87	6	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		55.6	60.5	109	54.3	64.7	119	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		55.6	51.8	93	54.3	53.6	99	3	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		55.6	52.5	95	54.3	52.3	96	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		55.6	57.5	104	54.3	57.7	106	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		55.6	54.0	97	54.3	54.7	101	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		55.6	6.1	11* a	54.3	2.8	5* a	74* b	40-140/20
132-64-9	Dibenzofuran	ND		55.6	48.9	88	54.3	51.2	94	5	40-140/20
84-74-2	Di-n-butyl phthalate	0.23	JB	55.6	52.7	94	54.3	52.2	96	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		55.6	57.4	103	54.3	57.1	105	1	40-140/20
84-66-2	Diethyl phthalate	ND		55.6	54.0	97	54.3	54.3	100	1	40-140/20
131-11-3	Dimethyl phthalate	ND		55.6	52.6	95	54.3	53.8	99	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		55.6	58.2	105	54.3	58.0	107	0	40-140/20
118-74-1	Hexachlorobenzene	ND		55.6	57.0	103	54.3	56.8	105	0	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40162-MS	R40297.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
OP40162-MSD	R40298.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483
MC34231-7	R40299.D	1	10/14/14	WK	10/11/14	OP40162	MSR1483

The QC reported here applies to the following samples: Method: SW846 8270D

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		55.6	27.5	50	54.3	30.0	55	9	40-140/20
67-72-1	Hexachloroethane	ND		55.6	33.7	61	54.3	34.4	63	2	40-140/20
78-59-1	Isophorone	ND		55.6	42.5	77	54.3	45.7	84	7	40-140/20
88-74-4	2-Nitroaniline	ND		55.6	52.2	94	54.3	52.8	97	1	40-140/20
99-09-2	3-Nitroaniline	ND		55.6	41.4	75	54.3	38.1	70	8	40-140/20
100-01-6	4-Nitroaniline	ND		55.6	44.1	79	54.3	39.7	73	11	40-140/20
98-95-3	Nitrobenzene	ND		55.6	47.9	86	54.3	51.3	94	7	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		55.6	32.6	59	54.3	33.9	62	4	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		55.6	43.8	62	54.3	48.5	89	10	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		55.6	51.0	92	54.3	50.6	93	1	40-140/20
110-86-1	Pyridine	ND		55.6	22.4	40	54.3	19.0	35* c	16	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
367-12-4	2-Fluorophenol	50%	53%	51%	15-110%
4165-62-2	Phenol-d5	33%	34%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	103%	98%	15-110%
4165-60-0	Nitrobenzene-d5	79%	84%	82%	30-130%
321-60-8	2-Fluorobiphenyl	78%	82%	78%	30-130%
1718-51-0	Terphenyl-d14	101%	104%	101%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.
(c) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40163-MS	I92208.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
OP40163-MSD	I92209.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436
MC34231-7	I92210.D	1	10/14/14	WK	10/11/14	OP40163	MSI3436

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-7

7.3.2

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CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		55.6	47.6	86	54.3	49.1	90	3	40-140/20
208-96-8	Acenaphthylene	ND		55.6	42.5	77	54.3	44.3	82	4	40-140/20
120-12-7	Anthracene	ND		55.6	50.3	91	54.3	50.4	93	0	40-140/20
56-55-3	Benzo(a)anthracene	ND		55.6	58.3	105	54.3	57.8	106	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		55.6	55.1	99	54.3	54.3	100	1	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		55.6	64.5	116	54.3	65.3	120	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		55.6	55.0	99	54.3	54.5	100	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		55.6	46.7	84	54.3	43.7	80	7	40-140/20
218-01-9	Chrysene	ND		55.6	54.7	98	54.3	53.1	98	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		55.6	55.8	100	54.3	55.0	101	1	40-140/20
206-44-0	Fluoranthene	ND		55.6	54.5	98	54.3	52.9	97	3	40-140/20
86-73-7	Fluorene	ND		55.6	48.8	88	54.3	50.5	93	3	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		55.6	54.9	99	54.3	54.3	100	1	40-140/20
90-12-0	1-Methylnaphthalene	0.99	J	55.6	43.7	77	54.3	45.4	82	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		55.6	42.8	77	54.3	44.9	83	5	40-140/20
85-01-8	Phenanthrene	0.030	J	55.6	52.2	94	54.3	51.8	95	1	40-140/20
129-00-0	Pyrene	ND		55.6	52.4	94	54.3	51.2	94	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
4165-60-0	Nitrobenzene-d5	82%	89%	85%	30-130%
321-60-8	2-Fluorobiphenyl	76%	79%	77%	30-130%
1718-51-0	Terphenyl-d14	97%	99%	95%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3436-CC3427	Injection Date:	10/14/14
Lab File ID:	I92191.D	Injection Time:	08:34
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	336604	3.08	744130	4.11	426551	5.60	751521	6.86	600563	9.59	1177704	10.98
Upper Limit [a]	673208	3.58	1488260	4.61	853102	6.10	1503042	7.36	1201126	10.09	2355408	11.48
Lower Limit [b]	168302	2.58	372065	3.61	213276	5.10	375761	6.36	300282	9.09	588852	10.48
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	327252	3.08	727869	4.11	411958	5.60	715382	6.86	581369	9.59	1167878	10.98
OP40146-MB	378539	3.08	847726	4.11	484702	5.60	835683	6.86	688819	9.59	1399448	10.98
OP40146-BS	374481	3.08	845802	4.11	481262	5.61	850006	6.87	669308	9.60	1327297	10.98
OP40146-MS	331510	3.08	752028	4.11	432936	5.60	769260	6.87	629274	9.60	1275081	10.98
OP40146-MSD	345605	3.08	786284	4.11	443935	5.60	782733	6.87	616606	9.60	1218422	10.98
MC34000-2	379502	3.08	845027	4.11	480803	5.60	835370	6.86	678867	9.59	1365604	10.98
ZZZZZZ	344797	3.08	767505	4.11	438849	5.60	766014	6.86	621430	9.59	1261360	10.98
ZZZZZZ	325548	3.08	725494	4.11	424556	5.60	738283	6.86	619892	9.59	1274969	10.98
ZZZZZZ	384730	3.08	847049	4.11	482863	5.60	839214	6.86	683729	9.59	1366128	10.98
ZZZZZZ	376835	3.08	832994	4.11	477776	5.60	833845	6.86	663391	9.59	1340907	10.98
ZZZZZZ	373050	3.08	830897	4.11	478969	5.60	835282	6.86	671750	9.59	1337260	10.98
ZZZZZZ	364561	3.08	805162	4.11	456343	5.60	794829	6.87	655996	9.61	1280385	11.00
ZZZZZZ	370484	3.08	825563	4.11	475082	5.60	823744	6.86	676933	9.59	1346951	10.98
ZZZZZZ	368064	3.08	813650	4.11	470091	5.60	816936	6.86	671039	9.59	1339960	10.98
OP40163-MB	385087	3.08	852123	4.11	493764	5.60	855079	6.86	693664	9.59	1375848	10.98
OP40163-BS	357647	3.08	808566	4.11	463308	5.61	810800	6.87	640283	9.60	1260126	10.98
OP40163-MS	369446	3.08	838224	4.11	471494	5.61	833313	6.87	650745	9.60	1281147	10.99
OP40163-MSD	371272	3.08	842475	4.11	478535	5.61	837950	6.87	670167	9.61	1310738	10.99
MC34231-7	348168	3.08	779448	4.11	444784	5.60	776719	6.86	627423	9.60	1248813	10.98
MC34231-1	355714	3.08	794008	4.11	457600	5.60	788590	6.86	645075	9.59	1280163	10.98
MC34231-2	354932	3.08	790348	4.11	455611	5.60	793195	6.86	638051	9.60	1280618	10.98
MC34231-3	382034	3.08	849910	4.11	487162	5.60	851147	6.86	689211	9.59	1375423	10.98
MC34231-4	362243	3.08	804538	4.11	463495	5.60	812196	6.86	656774	9.59	1323812	10.98
ZZZZZZ	362288	3.08	766417	4.11	456863	5.61	803095	6.86	653577	9.59	1300643	10.98
ZZZZZZ	354350	3.08	780334	4.11	448177	5.60	786614	6.86	643369	9.59	1247254	10.98
ZZZZZZ	376221	3.08	825613	4.11	472160	5.61	820164	6.86	644947	9.59	1213946	10.98
ZZZZZZ	360638	3.08	808074	4.11	471880	5.60	827045	6.86	680167	9.59	1349896	10.98

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3436-CC3427	Injection Date:	10/14/14
Lab File ID:	I92191.D	Injection Time:	08:34
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1483-CC1481	Injection Date:	10/14/14
Lab File ID:	R40294.D	Injection Time:	08:49
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	322327	4.24	1170015	5.34	691751	6.85	1185220	8.13	1243343	10.44	1132489	11.90
Upper Limit [a]	644654	4.74	2340030	5.84	1383502	7.35	2370440	8.63	2486686	10.94	2264978	12.40
Lower Limit [b]	161164	3.74	585008	4.84	345876	6.35	592610	7.63	621672	9.94	566245	11.40
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40162-MB	365730	4.24	1330566	5.34	803435	6.85	1355664	8.12	1347902	10.43	1294236	11.89
OP40162-BS	366601	4.24	1325587	5.34	782071	6.85	1314307	8.12	1314064	10.44	1190193	11.90
OP40162-MS	377237	4.24	1342938	5.34	783524	6.85	1306164	8.12	1274357	10.44	1188073	11.90
OP40162-MSD	388268	4.24	1383739	5.34	816285	6.85	1368120	8.12	1320214	10.44	1230116	11.90
MC34231-7	365702	4.24	1306853	5.34	785730	6.85	1296212	8.12	1249677	10.43	1179249	11.90
MC34231-1	353679	4.24	1277478	5.33	766041	6.85	1297098	8.12	1283432	10.43	1215637	11.89
MC34231-2	360333	4.24	1289565	5.33	760265	6.85	1291097	8.12	1266812	10.43	1218376	11.90
MC34231-3	382354	4.24	1387734	5.34	822396	6.85	1391169	8.12	1371130	10.43	1313083	11.89
ZZZZZZ	386335	4.24	1378431	5.33	824512	6.85	1368693	8.12	1390262	10.44	1335580	11.90
ZZZZZZ	410321	4.24	1470126	5.34	872249	6.85	1471590	8.12	1429952	10.43	1334244	11.90
ZZZZZZ	405779	4.24	1458597	5.34	879367	6.85	1489115	8.12	1502243	10.43	1432530	11.90
ZZZZZZ	397945	4.24	1445649	5.33	877616	6.85	1499693	8.12	1530481	10.43	1448737	11.90
MC34231-4	375099	4.24	1345909	5.34	799600	6.85	1346571	8.12	1307155	10.43	1246056	11.89

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34231-1	R40300.D	42	28	81	71	71	102
MC34231-2	R40301.D	57	37	99	91	86	103
MC34231-3	R40302.D	45	30	92	71	69	104
MC34231-4	R40307.D	52	34	95	82	78	108
MC34231-7	R40299.D	51	32	98	82	78	101
OP40162-BS	R40296.D	55	37	102	89	89	107
OP40162-MB	R40295.D	56	37	93	89	86	108
OP40162-MS	R40297.D	50	33	98	79	78	101
OP40162-MSD	R40298.D	53	34	103	84	82	104

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34231-1	I92211.D	73	70	96
MC34231-2	I92212.D	95	83	98
MC34231-3	I92213.D	75	68	99
MC34231-4	I92214.D	87	77	102
MC34231-7	I92210.D	85	77	95
OP40163-BS	I92207.D	93	87	105
OP40163-MB	I92206.D	93	85	103
OP40163-MS	I92208.D	82	76	97
OP40163-MSD	I92209.D	89	79	99

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-MB	BB59881.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-6, MC34231-7

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	98%	36-173%
460-00-4	Bromofluorobenzene (S)	100%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-BS	BB59882.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-6, MC34231-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.093	131	60-140
106-93-4	1,2-Dibromoethane	0.071	0.077	108	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	102%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40168-MS	BB59883.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
OP40168-MSD	BB59884.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333
MC34231-7	BB59885.D	1	10/13/14	NK	10/12/14	OP40168	GBB3333

The QC reported here applies to the following samples: Method: SW846 8011

MC34231-1, MC34231-2, MC34231-3, MC34231-4, MC34231-6, MC34231-7

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0677	0.081	120	0.0688	0.079	115	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0677	0.082	121	0.0688	0.083	121	1	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
460-00-4	Bromofluorobenzene (S)	78%	80%	89%	36-173%
460-00-4	Bromofluorobenzene (S)	123%	122%	121%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34231-1	BB59890.D	97	107
MC34231-2	BB59889.D	89	110
MC34231-3	BB59888.D	86	118
MC34231-4	BB59887.D	90	116
MC34231-6	BB59886.D	98	107
MC34231-7	BB59885.D	89	121
OP40168-BS	BB59882.D	102	101
OP40168-MB	BB59881.D	98	100
OP40168-MS	BB59883.D	78	123
OP40168-MSD	BB59884.D	80	122

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34231
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3333-ICC3333	Injection Date:	10/13/14
Lab File ID:	BB59877.D	Injection Time:	08:37
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40168-MB	BB59881.D	10/13/14	09:49	3.45	3.46
OP40168-BS	BB59882.D	10/13/14	10:07	3.45	3.46
OP40168-MS	BB59883.D	10/13/14	10:24	3.45	3.46
OP40168-MSD	BB59884.D	10/13/14	10:42	3.45	3.46
MC34231-7	BB59885.D	10/13/14	11:00	3.45	3.46
MC34231-6	BB59886.D	10/13/14	11:18	3.45	3.46
MC34231-4	BB59887.D	10/13/14	11:36	3.45	3.46
MC34231-3	BB59888.D	10/13/14	11:54	3.45	3.46
MC34231-2	BB59889.D	10/13/14	12:12	3.45	3.46
MC34231-1	BB59890.D	10/13/14	12:30	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34267

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/12/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW2-ROX-101014	MW22-ROX-101014
MW13-ROX-101014	TB-ROX-101014-HCL
TB-ROX-101014-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. Samples MW2-ROX-101014 and MW22-ROX-101014 were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for vinyl acetate and 4-chloroaniline exceeded 30 percent difference (%D). Also, the continuing calibration verification for vinyl acetate and 2-chloroethyl vinyl ether exceeded 40%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.9ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, although not requested on the COC, samples MW22-ROX-101014 and MW13-ROX-101014 were inadvertently not marked for analysis. Upon receipt, the laboratory confirmed with URS that samples MW22-ROX-101014 and MW13-ROX-101014 were to be analyzed based on sample labels; no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSL3916-BS	VOCs	Acetone	**63**	70-130
MSL3916-BS	VOCs	Dichlorodifluoromethane	**64**	70-130
MSL3916-BS	VOCs	1,4-Dioxane	**190**	70-130
MSL3916-BS	VOCs	2-Hexanone	**63**	70-130
MSL3916-BS	VOCs	Vinyl acetate	**178**	70-130
MSL3917-BS	VOCs	Acetone	**55**	70-130
MSL3917-BS	VOCs	2-Chloroethyl vinyl ether	**143**	70-130
MSL3917-BS	VOCs	2,2-Dichloropropane	**131**	70-130
MSL3917-BS	VOCs	2-Hexanone	**65**	70-130
MSL3917-BS	VOCs	Vinyl acetate	**212**	70-130
OP40190-BS	SVOCs	Hexachlorocyclopentadiene	**36**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSL3916-BS was associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW2-ROX-101014	VOCs	Acetone	**UJ**
MW2-ROX-101014	VOCs	Dichlorodifluoromethane	**UJ**
MW2-ROX-101014	VOCs	2-Hexanone	**UJ**
MW22-ROX-101014	VOCs	Acetone	**UJ**
MW22-ROX-101014	VOCs	Dichlorodifluoromethane	**UJ**
MW22-ROX-101014	VOCs	2-Hexanone	**UJ**
MW13-ROX-101014	VOCs	Acetone	**UJ**
MW13-ROX-101014	VOCs	2-Hexanone	**UJ**
MW22-ROX-101014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW13-ROX-101014	SVOCs	Hexachlorocyclopentadiene	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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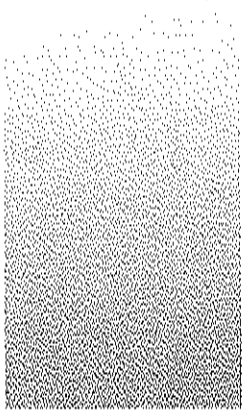
10/31/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34267

Sampling Date: 10/10/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **97**

Reviewed on 11/12/14

Reza Rand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2236)

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Sample Summary

Shell Oil

Job No: MC34267

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34267-1	10/10/14	09:25	MMSV	10/11/14	AQ	Ground Water	MW2-ROX-101014
MC34267-2	10/10/14	10:40	MMSV	10/11/14	AQ	Ground Water	MW22-ROX-101014
MC34267-3	10/10/14	15:20	MMSV	10/11/14	AQ	Ground Water	MW13-ROX-101014
MC34267-4	10/10/14	00:00	MMSV	10/11/14	AQ	Trip Blank Water	TB-ROX-101014-HCL
MC34267-5	10/10/14	00:00	MMSV	10/11/14	AQ	Trip Blank Water	TB-ROX-101014-ST

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC34267
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Centra	Report Date	10/27/2014 1:11:55 PM

3 Sample(s), 2 Trip Blank(s) were collected on 10/10/2014 and were received at Accutest on 10/11/2014 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of MC34267. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix: AQ	Batch ID: MSL3916

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Chloroethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, m,p-Xylene, Tetrachloroethene, 2-Butanone (MEK), Acrolein, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acrolein, Bromomethane, Chloroethane, Chloromethane, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits for sample MC34231-7MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Initial calibration verification standard MSL3909-ICV3872 for vinyl acetate exceed 30% difference (response biased high). Associated samples are non-detect for this compound.
- MC34231-7MS/MSD: Elevated detection limit due to limited sample volume.
- MC34231-7MS/MSD for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- Continuing alibration standard MSL3916-CC3872 for vinyl acetate exceed 40% difference (response biased high). Associated samples are non-detect for this compound.
- MSL3916-BS for 1,4-Dioxane, Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.

Matrix: AQ	Batch ID: MSL3917

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34338-3MS, MC34338-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC34267-3 have compounds reported with "D" qualifiers indicating results from the diluted analysis.
- Blank Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,4-Dioxane, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Dichlorodifluoromethane, Vinyl Acetate 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, Dichlorodifluoromethane, Vinyl Acetate, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Acetone are outside control limits for sample MC34338-3MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ	Batch ID: MSL3917

- MSL3917-BS for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- Continuing alibration standard MSL3917-CC3872 for vinyl acetate, 2-chloroethyl vinyl ether exceed 40% difference (response biased high). Associated samples are non-detect for this compound..

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP40179

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-10MS, MC34000-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification MSF3361-ICV3361 for 4-Chloroaniline exceed 30% Difference. 4-Chloroaniline is within in criteria in continuing calibration check standard MSF3368-CC3361, MSF3369-CC3361.

Matrix: AQ	Batch ID: OP40190

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-16MS, MC34000-16MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- OP40190-MS/MSD for Hexachlorocyclopentadiene: Outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP40180

- 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.
- Sample(s) MC34000-11MS, MC34000-11MSD were used as the QC samples indicated.

Matrix: AQ	Batch ID: OP40191

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-17MS, MC34000-17MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP40218

- 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.
- Sample(s) MC34000-20MS, MC34000-20MSD were used as the QC samples indicated.

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(MC34267).

Summary of Hits

Job Number: MC34267
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/10/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34267-1	MW2-ROX-101014					
Benzene		13.2	1.0	0.63	ug/l	SW846 8260C
n-Butylbenzene		14.5	10	2.2	ug/l	SW846 8260C
sec-Butylbenzene		5.7 J	10	0.84	ug/l	SW846 8260C
tert-Butylbenzene		1.1 J	10	0.78	ug/l	SW846 8260C
Ethylbenzene		386	2.0	0.76	ug/l	SW846 8260C
Isopropylbenzene		67.5	10	0.70	ug/l	SW846 8260C
p-Isopropyltoluene		6.3 J	10	0.75	ug/l	SW846 8260C
Naphthalene		51.2	10	1.4	ug/l	SW846 8260C
n-Propylbenzene		86.7	10	0.98	ug/l	SW846 8260C
Toluene		6.0	2.0	0.66	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		135	10	0.64	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		90.1	10	0.77	ug/l	SW846 8260C
m,p-Xylene		260	2.0	1.9	ug/l	SW846 8260C
o-Xylene		18.3	2.0	0.73	ug/l	SW846 8260C
Xylene (total)		278	2.0	0.73	ug/l	SW846 8260C
1-Methylnaphthalene		10.0	2.0		ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		21.4	2.0		ug/l	SW846 8270D BY SIM
MC34267-2	MW22-ROX-101014					
Benzene		1620	5.0	3.2	ug/l	SW846 8260C
n-Butylbenzene		16.5 J	50	11	ug/l	SW846 8260C
sec-Butylbenzene		6.6 J	50	4.2	ug/l	SW846 8260C
tert-Butylbenzene		9.6 J	50	3.9	ug/l	SW846 8260C
Ethylbenzene		1880	10	3.8	ug/l	SW846 8260C
Isopropylbenzene		66.1	50	3.5	ug/l	SW846 8260C
p-Isopropyltoluene		4.5 J	50	3.7	ug/l	SW846 8260C
Naphthalene		202	50	6.9	ug/l	SW846 8260C
n-Propylbenzene		112	50	4.9	ug/l	SW846 8260C
Toluene		2300	10	3.3	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		688	50	3.2	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		207	50	3.8	ug/l	SW846 8260C
m,p-Xylene		3080	10	9.3	ug/l	SW846 8260C
o-Xylene		1740	10	3.6	ug/l	SW846 8260C
Xylene (total)		4820	10	3.6	ug/l	SW846 8260C
2-Methylphenol		6.4 J	13	0.28	ug/l	SW846 8270D
3&4-Methylphenol		11.0 J	13	0.58	ug/l	SW846 8270D
Phenol		7.9	6.3	0.38	ug/l	SW846 8270D
Acenaphthene		0.29	0.13		ug/l	SW846 8270D BY SIM
Acenaphthylene		0.19	0.13		ug/l	SW846 8270D BY SIM
Anthracene		0.19	0.13		ug/l	SW846 8270D BY SIM
Fluorene		0.14	0.13		ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		19.3	2.5		ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC34267
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/10/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Methylnaphthalene		33.9	2.5		ug/l	SW846 8270D BY SIM
Phenanthrene		0.36	0.063		ug/l	SW846 8270D BY SIM
MC34267-3	MW13-ROX-101014					
Benzene		0.37 J	0.50	0.32	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.5	1.0	0.51	ug/l	SW846 8260C
Xylene (total)		1.1	1.0	0.36	ug/l	SW846 8260C
Acenaphthylene		0.19	0.12	0.059	ug/l	SW846 8270D BY SIM
Phenanthrene		0.032 J	0.060	0.015	ug/l	SW846 8270D BY SIM
MC34267-4	TB-ROX-101014-HCL					
No hits reported in this sample.						
MC34267-5	TB-ROX-101014-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87855.D	2	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	5.0	ug/l	UJ
107-02-8	Acrolein	ND	50	12	ug/l	
107-13-1	Acrylonitrile	ND	10	4.2	ug/l	
71-43-2	Benzene	13.2	1.0	0.63	ug/l	
108-86-1	Bromobenzene	ND	10	0.70	ug/l	
74-97-5	Bromochloromethane	ND	10	1.1	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.68	ug/l	
75-25-2	Bromoform	ND	2.0	1.2	ug/l	
74-83-9	Bromomethane	ND	4.0	3.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	5.0	ug/l	
104-51-8	n-Butylbenzene	14.5	10	2.2	ug/l	
135-98-8	sec-Butylbenzene	5.7	10	0.84	ug/l	J
98-06-6	tert-Butylbenzene	1.1	10	0.78	ug/l	J
75-15-0	Carbon disulfide	ND	10	0.92	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	1.1	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.86	ug/l	
75-00-3	Chloroethane	ND	4.0	1.1	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10	6.6	ug/l	
67-66-3	Chloroform	ND	2.0	0.82	ug/l	
74-87-3	Chloromethane	ND	4.0	2.1	ug/l	
95-49-8	o-Chlorotoluene	ND	10	0.76	ug/l	
106-43-4	p-Chlorotoluene	ND	10	0.90	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.76	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.63	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2.0	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.71	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4.0	1.4	ug/l	UJ
75-34-3	1,1-Dichloroethane	ND	2.0	0.72	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	2.0	1.2	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	1.7	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	1.0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4.0	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	10	1.8	ug/l	
594-20-7	2,2-Dichloropropane	ND	10	2.5	ug/l	
563-58-6	1,1-Dichloropropene	ND	10	0.95	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.84	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	1.0	ug/l	
123-91-1	1,4-Dioxane	ND	50	22	ug/l	
97-63-2	Ethyl methacrylate	ND	10	1.0	ug/l	
100-41-4	Ethylbenzene	386	2.0	0.76	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	3.3	ug/l	
591-78-6	2-Hexanone	ND	10	3.2	ug/l	UJ
98-82-8	Isopropylbenzene	67.5	10	0.70	ug/l	
99-87-6	p-Isopropyltoluene	6.3	10	0.75	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10	2.0	ug/l	
74-95-3	Methylene bromide	ND	10	1.0	ug/l	
75-09-2	Methylene chloride	ND	4.0	0.56	ug/l	
91-20-3	Naphthalene	51.2	10	1.4	ug/l	
103-65-1	n-Propylbenzene	86.7	10	0.98	ug/l	
100-42-5	Styrene	ND	10	1.7	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.87	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.80	ug/l	
127-18-4	Tetrachloroethene	ND	2.0	1.2	ug/l	
108-88-3	Toluene	6.0	2.0	0.66	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	1.4	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.93	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.91	ug/l	
79-01-6	Trichloroethene	ND	2.0	0.94	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	1.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	1.6	ug/l	
95-63-6	1,2,4-Trimethylbenzene	135	10	0.64	ug/l	
108-67-8	1,3,5-Trimethylbenzene	90.1	10	0.77	ug/l	
108-05-4	Vinyl Acetate	ND	10	1.4	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.2	ug/l	
	m,p-Xylene	260	2.0	1.9	ug/l	
95-47-6	o-Xylene	18.3	2.0	0.73	ug/l	
1330-20-7	Xylene (total)	278	2.0	0.73	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	128%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76882.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.1	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.1

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.1	ug/l	
78-59-1	Isophorone	ND	5.1	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ug/l	
98-95-3	Nitrobenzene	ND	5.1	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	106%		15-110%
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	105%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected
RL = Reporting Limit
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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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92229.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	10.0	2.0	ug/l	
91-57-6	2-Methylnaphthalene	21.4	2.0	ug/l	
85-01-8	Phenanthrene	ND	0.051	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

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:	MW2-ROX-101014		
Lab Sample ID:	MC34267-1	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59919.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	70%		36-173%
460-00-4	Bromofluorobenzene (S)	78%		36-173%

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:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87856.D	10	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	25	ug/l	UJ
107-02-8	Acrolein	ND	250	60	ug/l	
107-13-1	Acrylonitrile	ND	50	21	ug/l	
71-43-2	Benzene	1620	5.0	3.2	ug/l	
108-86-1	Bromobenzene	ND	50	3.5	ug/l	
74-97-5	Bromochloromethane	ND	50	5.7	ug/l	
75-27-4	Bromodichloromethane	ND	10	3.4	ug/l	
75-25-2	Bromoform	ND	10	6.1	ug/l	
74-83-9	Bromomethane	ND	20	18	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	25	ug/l	
104-51-8	n-Butylbenzene	16.5	50	11	ug/l	J
135-98-8	sec-Butylbenzene	6.6	50	4.2	ug/l	J
98-06-6	tert-Butylbenzene	9.6	50	3.9	ug/l	J
75-15-0	Carbon disulfide	ND	50	4.6	ug/l	
56-23-5	Carbon tetrachloride	ND	10	5.3	ug/l	
108-90-7	Chlorobenzene	ND	10	4.3	ug/l	
75-00-3	Chloroethane	ND	20	5.3	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	50	33	ug/l	
67-66-3	Chloroform	ND	10	4.1	ug/l	
74-87-3	Chloromethane	ND	20	11	ug/l	
95-49-8	o-Chlorotoluene	ND	50	3.8	ug/l	
106-43-4	p-Chlorotoluene	ND	50	4.5	ug/l	
124-48-1	Dibromochloromethane	ND	10	3.8	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	3.6	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	7.1	ug/l	UJ
75-34-3	1,1-Dichloroethane	ND	10	3.6	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	5.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	6.1	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	8.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.1	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	20	5.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	8.9	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	13	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	4.7	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	4.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	5.0	ug/l	
123-91-1	1,4-Dioxane	ND	250	110	ug/l	
97-63-2	Ethyl methacrylate	ND	50	5.0	ug/l	
100-41-4	Ethylbenzene	1880	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	17	ug/l	
591-78-6	2-Hexanone	ND	50	16	ug/l	
98-82-8	Isopropylbenzene	66.1	50	3.5	ug/l	
99-87-6	p-Isopropyltoluene	4.5	50	3.7	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	10	5.1	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	9.9	ug/l	
74-95-3	Methylene bromide	ND	50	5.2	ug/l	
75-09-2	Methylene chloride	ND	20	2.8	ug/l	
91-20-3	Naphthalene	202	50	6.9	ug/l	
103-65-1	n-Propylbenzene	112	50	4.9	ug/l	
100-42-5	Styrene	ND	50	8.5	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	4.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	4.0	ug/l	
127-18-4	Tetrachloroethene	ND	10	5.9	ug/l	
108-88-3	Toluene	2300	10	3.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	6.8	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	4.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	4.5	ug/l	
79-01-6	Trichloroethene	ND	10	4.7	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	5.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	8.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	688	50	3.2	ug/l	
108-67-8	1,3,5-Trimethylbenzene	207	50	3.8	ug/l	
108-05-4	Vinyl Acetate	ND	50	7.1	ug/l	
75-01-4	Vinyl chloride	ND	10	5.8	ug/l	
	m,p-Xylene	3080	10	9.3	ug/l	
95-47-6	o-Xylene	1740	10	3.6	ug/l	
1330-20-7	Xylene (total)	4820	10	3.6	ug/l	

ND = Not detected MDL = Method Detection Limit
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E = Indicates value exceeds calibration range
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	127%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76916.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	13	3.1	ug/l	
95-57-8	2-Chlorophenol	ND	6.3	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	13	1.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	13	0.50	ug/l	
105-67-9	2,4-Dimethylphenol	ND	13	0.70	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	3.1	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	13	2.4	ug/l	
95-48-7	2-Methylphenol	6.4	13	0.28	ug/l	J
	3&4-Methylphenol	11.0	13	0.58	ug/l	J
88-75-5	2-Nitrophenol	ND	13	3.6	ug/l	
100-02-7	4-Nitrophenol	ND	25	0.67	ug/l	
87-86-5	Pentachlorophenol	ND	13	1.4	ug/l	
108-95-2	Phenol	7.9	6.3	0.38	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	13	0.46	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	13	0.22	ug/l	
62-53-3	Aniline	ND	13	0.80	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.3	0.59	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.3	0.66	ug/l	
100-51-6	Benzyl Alcohol	ND	13	2.8	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.3	0.39	ug/l	
106-47-8	4-Chloroaniline	ND	13	0.70	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.3	0.36	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.3	0.44	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.3	0.41	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.3	0.31	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.3	0.30	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	13	0.57	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	13	0.38	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.3	0.33	ug/l	
132-64-9	Dibenzofuran	ND	2.5	0.32	ug/l	
84-74-2	Di-n-butyl phthalate	ND	6.3	0.22	ug/l	
117-84-0	Di-n-octyl phthalate	ND	6.3	0.35	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	6.3	0.25	ug/l	
131-11-3	Dimethyl phthalate	ND	6.3	0.43	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.5	0.42	ug/l	
118-74-1	Hexachlorobenzene	ND	6.3	0.36	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	13	1.6	ug/l	uJ
67-72-1	Hexachloroethane	ND	6.3	0.38	ug/l	
78-59-1	Isophorone	ND	6.3	0.56	ug/l	
88-74-4	2-Nitroaniline	ND	13	0.50	ug/l	
99-09-2	3-Nitroaniline	ND	13	1.7	ug/l	
100-01-6	4-Nitroaniline	ND	13	2.7	ug/l	
98-95-3	Nitrobenzene	ND	6.3	0.49	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.3	1.3	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.3	0.50	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.3	0.24	ug/l	
110-86-1	Pyridine	ND	13	0.64	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		15-110%
4165-62-2	Phenol-d5	38%		15-110%
118-79-6	2,4,6-Tribromophenol	100%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92259.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438
Run #2							

	Initial Volume	Final Volume
Run #1	800 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	0.29	0.13	ug/l	
208-96-8	Acenaphthylene	0.19	0.13	ug/l	
120-12-7	Anthracene	0.19	0.13	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.063	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.13	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.063	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.13	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.13	ug/l	
218-01-9	Chrysene	ND	0.13	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.13	ug/l	
206-44-0	Fluoranthene	ND	0.13	ug/l	
86-73-7	Fluorene	0.14	0.13	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.13	ug/l	
90-12-0	1-Methylnaphthalene	19.3	2.5	ug/l	
91-57-6	2-Methylnaphthalene	33.9	2.5	ug/l	
85-01-8	Phenanthrene	0.36	0.063	ug/l	
129-00-0	Pyrene	ND	0.13	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	84%		30-130%

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:	MW22-ROX-101014		
Lab Sample ID:	MC34267-2	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59920.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	53%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87872.D	1	10/24/14	GK	n/a	n/a	MSL3917
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U5
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.37	0.50	0.32	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	us
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.5	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	1.1	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	129%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F76917.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
Run #2							

	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	12	ug/l	
95-57-8	2-Chlorophenol	ND	6.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	ug/l	
95-48-7	2-Methylphenol	ND	12	ug/l	
	3&4-Methylphenol	ND	12	ug/l	
88-75-5	2-Nitrophenol	ND	12	ug/l	
100-02-7	4-Nitrophenol	ND	24	ug/l	
87-86-5	Pentachlorophenol	ND	12	ug/l	
108-95-2	Phenol	ND	6.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	ug/l	
62-53-3	Aniline	ND	12	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	6.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	6.0	ug/l	
100-51-6	Benzyl Alcohol	ND	12	ug/l	
91-58-7	2-Chloronaphthalene	ND	6.0	ug/l	
106-47-8	4-Chloroaniline	ND	12	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	6.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	6.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	6.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	6.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	6.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	6.0	ug/l	
132-64-9	Dibenzofuran	ND	2.4	ug/l	
84-74-2	Di-n-butyl phthalate	ND	6.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	6.0	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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.3

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
84-66-2	Diethyl phthalate	ND	6.0	ug/l	
131-11-3	Dimethyl phthalate	ND	6.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	ug/l	
118-74-1	Hexachlorobenzene	ND	6.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	ug/l	U
67-72-1	Hexachloroethane	ND	6.0	ug/l	
78-59-1	Isophorone	ND	6.0	ug/l	
88-74-4	2-Nitroaniline	ND	12	ug/l	
99-09-2	3-Nitroaniline	ND	12	ug/l	
100-01-6	4-Nitroaniline	ND	12	ug/l	
98-95-3	Nitrobenzene	ND	6.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	6.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	6.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	6.0	ug/l	
110-86-1	Pyridine	ND	12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		15-110%
4165-62-2	Phenol-d5	36%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	70%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92260.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438
Run #2							

	Initial Volume	Final Volume
Run #1	840 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.082	ug/l	
208-96-8	Acenaphthylene	0.19	0.12	0.059	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.060	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.060	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.046	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.4	0.60	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.4	0.60	ug/l	
85-01-8	Phenanthrene	0.032	0.060	0.015	ug/l	J
129-00-0	Pyrene	ND	0.12	0.046	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW13-ROX-101014		
Lab Sample ID:	MC34267-3	Date Sampled:	10/10/14
Matrix:	AQ - Ground Water	Date Received:	10/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59921.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	66%		36-173%
460-00-4	Bromofluorobenzene (S)	76%		36-173%

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:	TB-ROX-101014-HCL		
Lab Sample ID:	MC34267-4	Date Sampled:	10/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87842.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101014-HCL		
Lab Sample ID:	MC34267-4	Date Sampled:	10/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101014-HCL		
Lab Sample ID:	MC34267-4	Date Sampled:	10/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	122%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101014-ST		
Lab Sample ID:	MC34267-5	Date Sampled:	10/10/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/11/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59922.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	35.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	73%		36-173%
460-00-4	Bromofluorobenzene (S)	77%		36-173%

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

Custody Documents and Other Forms

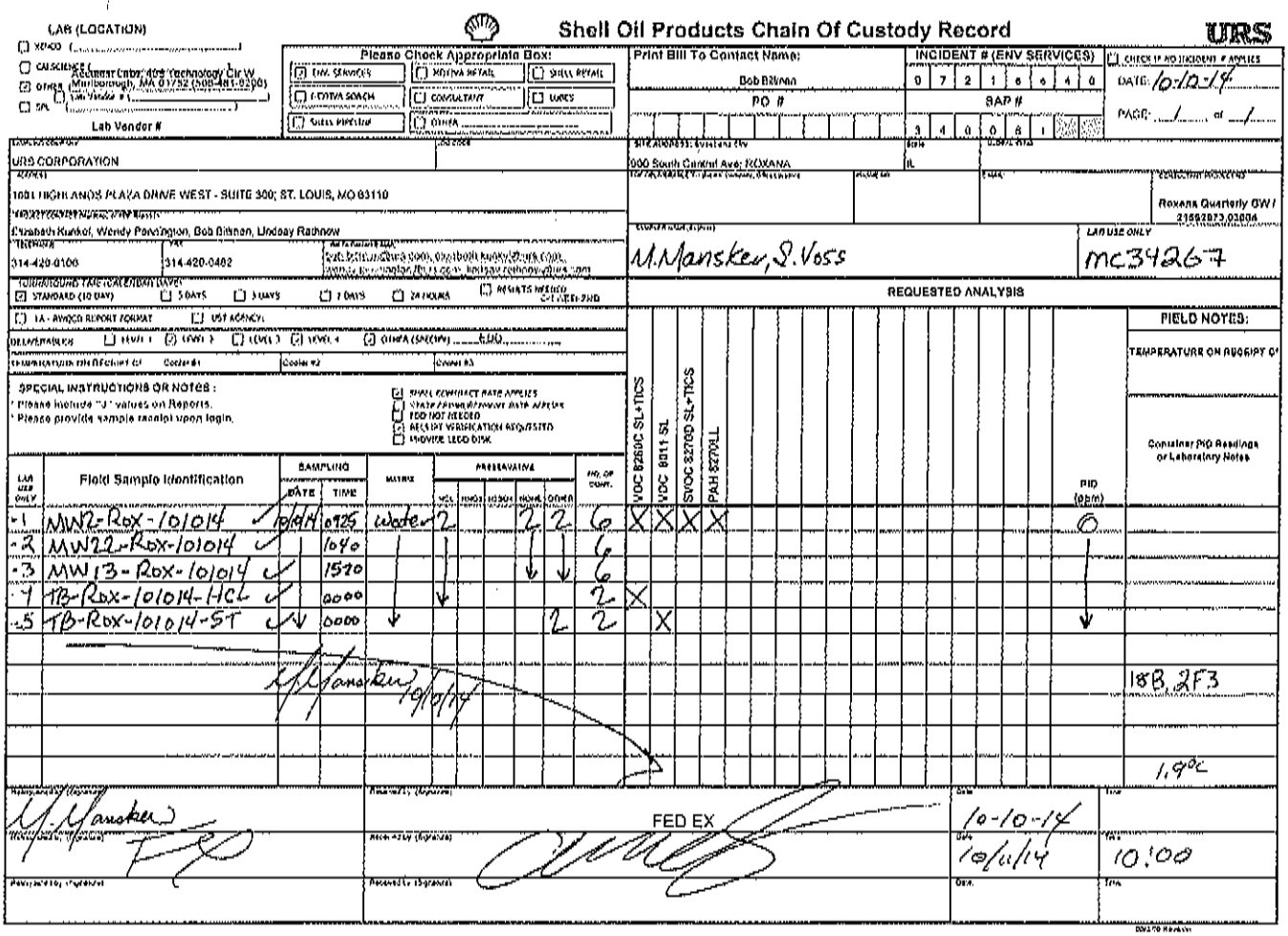
Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ XENCO ( )
☐ CALSCIENCE ( )
☑ OTHER (Accutest Labs, 495 Technology Cir W Marlborough, MA 01752 (508-481-6200))
☐ SPL (Lab Vendor #)

Lab Vendor #



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOACH ☐ CONSULTANT ☐ USES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bittman

PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 6 6 4 0

SAP #: 3 4 0 0 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-10-14

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Bittman, Lindsay Rathnow

314-420-0100 | 314-420-0482

900 South Central Ave; ROXANA | IL

Roxana Quarterly GW / 21592873.03804

M.Mansker, S.Voss

LAB USE ONLY: MC34267

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 7 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON SEE FIND

☐ 1A - AWQCD REPORT FORMAT ☐ UST AGENCY

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE PROGRAM/PROJECT RATE APPLIES
☐ FDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

FIELD NOTES: TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE VOL	HNO3	HCO3	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW2-Rox-101014	10/10/14	0925	water	2			2	2	6	X	X	X	X	0	
-2	MW22-Rox-101014		1040							6						
-3	MW13-Rox-101014		1520							6						
-4	TB-Rox-101014-HCL		0000							2	X					
-5	TB-Rox-101014-ST		0000						2	2		X				
																18B, 2F3
																1.9°C

M.Mansker 10/10/14

Relinquished by (Signature)	Received by (Signature)	Date	Time
M.Mansker	FED EX	10-10-14	
Relinquished by (Signature)	Received by (Signature)	Date 10/11/14	Time 10:00
Relinquished by (Signature)	Received by (Signature)	Date	Time

5.1

5

MC34267: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34267 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 10/11/2014 10:00:00 AM **Delivery Method:**

Project: 900 SOUTH CENTRAL **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:	Glass Thermometer
3. Cooler media:	Ice (Bag)

Quality Control Preservation	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 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 rec'd 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 rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-2 AND -3 have no analysis checked off on the coc.

ACCUTEST LABORATORIES

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC34267

CSR: Jeremy Vienneau **Response Date:** 10/13/2014

Response: The client confirmed that samples -2 and -3 should have been marked for all of the analyses. See email in file.

5.1

5

MC34267: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34267

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34267-1 Collected: 10-OCT-14 09:25 By: MMSV Received: 11-OCT-14 By: MW2-ROX-101014						
MC34267-1	SW846 8270D BY SIM	15-OCT-14 11:20	WK	13-OCT-14	MD	B8270SIMSL
MC34267-1	SW846 8270D	15-OCT-14 16:09	WK	13-OCT-14	MD	AB8270SL+
MC34267-1	SW846 8011	16-OCT-14 12:13	NK	15-OCT-14	NE	V8011SL
MC34267-1	SW846 8260C	23-OCT-14 22:21	GK			V8260SL+
MC34267-2 Collected: 10-OCT-14 10:40 By: MMSV Received: 11-OCT-14 By: MW22-ROX-101014						
MC34267-2	SW846 8270D BY SIM	16-OCT-14 10:49	WK	14-OCT-14	AZ	B8270SIMSL
MC34267-2	SW846 8011	16-OCT-14 12:30	NK	15-OCT-14	NE	V8011SL
MC34267-2	SW846 8270D	16-OCT-14 16:28	WK	14-OCT-14	AZ	AB8270SL+
MC34267-2	SW846 8260C	23-OCT-14 22:52	GK			V8260SL+
MC34267-3 Collected: 10-OCT-14 15:20 By: MMSV Received: 11-OCT-14 By: MW13-ROX-101014						
MC34267-3	SW846 8270D BY SIM	16-OCT-14 11:12	WK	14-OCT-14	AZ	B8270SIMSL
MC34267-3	SW846 8011	16-OCT-14 12:48	NK	15-OCT-14	NE	V8011SL
MC34267-3	SW846 8270D	16-OCT-14 16:51	WK	14-OCT-14	AZ	AB8270SL+
MC34267-3	SW846 8260C	24-OCT-14 11:00	GK			V8260SL+
MC34267-4 Collected: 10-OCT-14 00:00 By: MMSV Received: 11-OCT-14 By: TB-ROX-101014-HCL						
MC34267-4	SW846 8260C	23-OCT-14 15:47	GK			V8260SL+
MC34267-5 Collected: 10-OCT-14 00:00 By: MMSV Received: 11-OCT-14 By: TB-ROX-101014-ST						
MC34267-5	SW846 8011	16-OCT-14 13:06	NK	15-OCT-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34267-1.2	Walk In Ref #22	Marc Tahtamoni	10/13/14 15:50	Retrieve from Storage
MC34267-1.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34267-1.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34267-1.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34267-1.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34267-1.4	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34267-1.4	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument
MC34267-1.4	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34267-1.4	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34267-1.6	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage
MC34267-2.1	Walk In Ref #22	Michael DiBuono	10/14/14 08:33	Retrieve from Storage
MC34267-2.2	Walk In Ref #22	Michael DiBuono	10/14/14 08:26	Retrieve from Storage
MC34267-2.2	Michael DiBuono	Walk In Ref #22	10/14/14 08:32	Return to Storage
MC34267-2.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34267-2.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34267-2.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34267-2.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34267-2.4	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34267-2.4	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument
MC34267-2.4	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34267-2.4	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34267-2.5	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage
MC34267-3.2	Walk In Ref #22	Michael DiBuono	10/14/14 08:26	Retrieve from Storage
MC34267-3.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34267-3.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34267-3.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34267-3.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34267-3.3	VOC Ref #2	Gary Krasinski	10/24/14 10:34	Retrieve from Storage
MC34267-3.3	Gary Krasinski	GCMSL	10/24/14 10:34	Load on Instrument
MC34267-3.3	GCMSL	Gary Krasinski	10/27/14 09:07	Unload from Instrument
MC34267-3.3	Gary Krasinski	VOC Ref #2	10/27/14 09:08	Return to Storage
MC34267-3.4	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34267-3.4	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument

Accutest Internal Chain of Custody

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/11/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34267-3.4	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34267-3.4	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34267-3.6	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage
MC34267-4.1	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34267-4.1	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34267-4.1	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34267-4.1	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34267-4.2	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34267-4.2	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument
MC34267-4.2	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34267-4.2	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34267-5.2	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage

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: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

6.1.1

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	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	
74-97-5	Bromochloromethane	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	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	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	
124-48-1	Dibromochloromethane	ND	1.0	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	

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	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	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	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	
108-05-4	Vinyl Acetate	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	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	117%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	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	
74-97-5	Bromochloromethane	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	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	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	
124-48-1	Dibromochloromethane	ND	1.0	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	

6.1.2

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	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	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	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	
108-05-4	Vinyl Acetate	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	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

6.1.2

6

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	123%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

6

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.3	63* a	70-130
107-02-8	Acrolein	250	176	70	70-130
107-13-1	Acrylonitrile	50	38.5	77	70-130
71-43-2	Benzene	50	42.8	86	70-130
108-86-1	Bromobenzene	50	44.3	89	70-130
74-97-5	Bromochloromethane	50	41.8	84	70-130
75-27-4	Bromodichloromethane	50	46.3	93	70-130
75-25-2	Bromoform	50	38.5	77	70-130
74-83-9	Bromomethane	50	45.7	91	70-130
78-93-3	2-Butanone (MEK)	50	40.5	81	70-130
104-51-8	n-Butylbenzene	50	52.0	104	70-130
135-98-8	sec-Butylbenzene	50	48.7	97	70-130
98-06-6	tert-Butylbenzene	50	50.9	102	70-130
75-15-0	Carbon disulfide	50	39.8	80	70-130
56-23-5	Carbon tetrachloride	50	42.3	85	70-130
108-90-7	Chlorobenzene	50	39.3	79	70-130
75-00-3	Chloroethane	50	49.8	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.0	72	70-130
67-66-3	Chloroform	50	49.4	99	70-130
74-87-3	Chloromethane	50	50.8	102	70-130
95-49-8	o-Chlorotoluene	50	49.6	99	70-130
106-43-4	p-Chlorotoluene	50	48.0	96	70-130
124-48-1	Dibromochloromethane	50	45.2	90	70-130
95-50-1	1,2-Dichlorobenzene	50	43.1	86	70-130
541-73-1	1,3-Dichlorobenzene	50	42.8	86	70-130
106-46-7	1,4-Dichlorobenzene	50	41.2	82	70-130
75-71-8	Dichlorodifluoromethane	50	32.2	64* a	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	45.2	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	70-130
156-60-5	trans-1,2-Dichloroethene	50	42.9	86	70-130
78-87-5	1,2-Dichloropropane	50	42.0	84	70-130
142-28-9	1,3-Dichloropropane	50	39.2	78	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	45.8	92	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.2	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	43.6	87	70-130
123-91-1	1,4-Dioxane	125	238	190* b	70-130
97-63-2	Ethyl methacrylate	50	40.1	80	77-137
100-41-4	Ethylbenzene	50	39.8	80	70-130
87-68-3	Hexachlorobutadiene	50	41.3	83	70-130
591-78-6	2-Hexanone	50	31.7	63* a	70-130
98-82-8	Isopropylbenzene	50	49.2	98	70-130
99-87-6	p-Isopropyltoluene	50	46.0	92	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.2	88	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	36.4	73	70-130
74-95-3	Methylene bromide	50	39.6	79	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	51.8	104	70-130
103-65-1	n-Propylbenzene	50	50.3	101	70-130
100-42-5	Styrene	50	42.4	85	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	41.7	83	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	43.6	87	70-130
127-18-4	Tetrachloroethene	50	40.4	81	70-130
108-88-3	Toluene	50	43.2	86	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.0	84	70-130
120-82-1	1,2,4-Trichlorobenzene	50	43.8	88	70-130
71-55-6	1,1,1-Trichloroethane	50	50.2	100	70-130
79-00-5	1,1,2-Trichloroethane	50	41.1	82	70-130
79-01-6	Trichloroethene	50	40.8	82	70-130
75-69-4	Trichlorofluoromethane	50	43.8	88	70-130
96-18-4	1,2,3-Trichloropropane	50	47.8	96	70-130
95-63-6	1,2,4-Trimethylbenzene	50	48.3	97	70-130
108-67-8	1,3,5-Trimethylbenzene	50	45.6	91	70-130
108-05-4	Vinyl Acetate	50	88.8	178* b	70-130
75-01-4	Vinyl chloride	50	37.8	76	70-130
	m,p-Xylene	100	78.0	78	70-130
95-47-6	o-Xylene	50	41.0	82	70-130
1330-20-7	Xylene (total)	150	119	79	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

6.2.2

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

MC34267-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	27.4	55* a	70-130
107-02-8	Acrolein	250	220	88	70-130
107-13-1	Acrylonitrile	50	45.4	91	70-130
71-43-2	Benzene	50	48.9	98	70-130
108-86-1	Bromobenzene	50	51.2	102	70-130
74-97-5	Bromochloromethane	50	51.2	102	70-130
75-27-4	Bromodichloromethane	50	53.4	107	70-130
75-25-2	Bromoform	50	41.9	84	70-130
74-83-9	Bromomethane	50	59.5	119	70-130
78-93-3	2-Butanone (MEK)	50	45.1	90	70-130
104-51-8	n-Butylbenzene	50	59.6	119	70-130
135-98-8	sec-Butylbenzene	50	56.2	112	70-130
98-06-6	tert-Butylbenzene	50	58.5	117	70-130
75-15-0	Carbon disulfide	50	47.1	94	70-130
56-23-5	Carbon tetrachloride	50	48.6	97	70-130
108-90-7	Chlorobenzene	50	42.3	85	70-130
75-00-3	Chloroethane	50	58.0	116	70-130
110-75-8	2-Chloroethyl vinyl ether	50	71.7	143* a	70-130
67-66-3	Chloroform	50	58.0	116	70-130
74-87-3	Chloromethane	50	59.0	118	70-130
95-49-8	o-Chlorotoluene	50	58.8	118	70-130
106-43-4	p-Chlorotoluene	50	56.1	112	70-130
124-48-1	Dibromochloromethane	50	46.9	94	70-130
95-50-1	1,2-Dichlorobenzene	50	48.9	98	70-130
541-73-1	1,3-Dichlorobenzene	50	49.8	100	70-130
106-46-7	1,4-Dichlorobenzene	50	48.0	96	70-130
75-71-8	Dichlorodifluoromethane	50	36.2	72	70-130
75-34-3	1,1-Dichloroethane	50	57.3	115	70-130
107-06-2	1,2-Dichloroethane	50	58.3	117	70-130
75-35-4	1,1-Dichloroethene	50	51.9	104	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	70-130
156-60-5	trans-1,2-Dichloroethene	50	51.2	102	70-130
78-87-5	1,2-Dichloropropane	50	50.0	100	70-130
142-28-9	1,3-Dichloropropane	50	41.2	82	70-130
594-20-7	2,2-Dichloropropane	50	65.5	131* a	70-130
563-58-6	1,1-Dichloropropene	50	52.8	106	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.8	100	70-130
10061-02-6	trans-1,3-Dichloropropene	50	50.9	102	70-130
123-91-1	1,4-Dioxane	125	95.2	76	70-130
97-63-2	Ethyl methacrylate	50	45.9	92	77-137
100-41-4	Ethylbenzene	50	42.5	85	70-130
87-68-3	Hexachlorobutadiene	50	48.6	97	70-130
591-78-6	2-Hexanone	50	32.5	65* a	70-130
98-82-8	Isopropylbenzene	50	57.4	115	70-130
99-87-6	p-Isopropyltoluene	50	53.7	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.0	98	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	37.8	76	70-130
74-95-3	Methylene bromide	50	47.0	94	70-130
75-09-2	Methylene chloride	50	48.1	96	70-130
91-20-3	Naphthalene	50	57.4	115	70-130
103-65-1	n-Propylbenzene	50	58.8	118	70-130
100-42-5	Styrene	50	45.9	92	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	44.7	89	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-130
127-18-4	Tetrachloroethene	50	44.6	89	70-130
108-88-3	Toluene	50	48.5	97	70-130
87-61-6	1,2,3-Trichlorobenzene	50	48.1	96	70-130
120-82-1	1,2,4-Trichlorobenzene	50	50.1	100	70-130
71-55-6	1,1,1-Trichloroethane	50	58.7	117	70-130
79-00-5	1,1,2-Trichloroethane	50	46.7	93	70-130
79-01-6	Trichloroethene	50	45.8	92	70-130
75-69-4	Trichlorofluoromethane	50	50.6	101	70-130
96-18-4	1,2,3-Trichloropropane	50	54.4	109	70-130
95-63-6	1,2,4-Trimethylbenzene	50	56.9	114	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.2	106	70-130
108-05-4	Vinyl Acetate	50	106	212* b	70-130
75-01-4	Vinyl chloride	50	44.0	88	70-130
	m,p-Xylene	100	83.8	84	70-130
95-47-6	o-Xylene	50	42.7	85	70-130
1330-20-7	Xylene (total)	150	127	85	70-130

* = Outside of Control Limits.

6.2.2

6

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	106%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	78.1	31* [b]	250	68.6	27* [b]	13	70-130/30
107-02-8	Acrolein	ND		1250	1500	120	1250	748	60* [b]	67* [c]	70-130/30
107-13-1	Acrylonitrile	ND		250	217	87	250	177	71	20	70-130/30
71-43-2	Benzene	28.0		250	268	96	250	230	81	15	70-130/30
108-86-1	Bromobenzene	ND		250	259	104	250	212	85	20	70-130/30
74-97-5	Bromochloromethane	ND		250	246	98	250	213	85	14	70-130/30
75-27-4	Bromodichloromethane	ND		250	269	108	250	228	91	16	70-130/30
75-25-2	Bromoform	ND		250	211	84	250	179	72	16	70-130/30
74-83-9	Bromomethane	ND		250	326	130	250	210	84	43* [c]	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	200	80	250	137	55* [b]	37* [c]	70-130/30
104-51-8	n-Butylbenzene	ND		250	283	113	250	237	95	18	70-130/30
135-98-8	sec-Butylbenzene	0.83	J	250	279	111	250	231	92	19	70-130/30
98-06-6	tert-Butylbenzene	4.9	J	250	294	116	250	247	97	17	70-130/30
75-15-0	Carbon disulfide	ND		250	222	89	250	185	74	18	70-130/30
56-23-5	Carbon tetrachloride	ND		250	241	96	250	193	77	22	70-130/30
108-90-7	Chlorobenzene	ND		250	207	83	250	175	70	17	70-130/30
75-00-3	Chloroethane	ND		250	350	140* [b]	250	180	72	64* [c]	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	329	132* [b]	250	227	91	37* [c]	70-130/30
67-66-3	Chloroform	ND		250	285	114	250	228	91	22	70-130/30
74-87-3	Chloromethane	ND		250	318	127	250	196	78	47* [c]	70-130/30
95-49-8	o-Chlorotoluene	ND		250	287	115	250	231	92	22	70-130/30
106-43-4	p-Chlorotoluene	ND		250	282	113	250	228	91	21	70-130/30
124-48-1	Dibromochloromethane	ND		250	236	94	250	197	79	18	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	244	98	250	195	78	22	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	245	98	250	201	80	20	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	199	80	18	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	218	87	250	115	46* [b]	62* [c]	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	280	112	250	230	92	20	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	283	113	250	248	99	13	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	253	101	250	200	80	23	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	259	104	250	219	88	17	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	249	100	250	204	82	20	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	245	98	250	208	83	16	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	210	84	250	174	70	19	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	338	135* [b]	250	261	104	26	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	264	106	250	210	84	23	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	255	102	250	212	85	18	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	262	105	250	213	85	21	70-130/30
123-91-1	1,4-Dioxane	ND		625	561	90	625	492	79	13	70-130/30
97-63-2	Ethyl methacrylate	ND		250	241	96	250	195	78	21	72-139/30
100-41-4	Ethylbenzene	ND		250	214	86	250	176	70	19	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	227	91	250	194	78	16	70-130/30
591-78-6	2-Hexanone	ND		250	129	52* [b]	250	105	42* [b]	21	70-130/30
98-82-8	Isopropylbenzene	1.2	J	250	283	113	250	231	92	20	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	263	105	250	221	88	17	70-130/30
1634-04-4	Methyl Tert Butyl Ether	19.0		250	272	101	250	226	83	18	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	216	86	250	170	68* [b]	24	70-130/30
74-95-3	Methylene bromide	ND		250	235	94	250	194	78	19	70-130/30
75-09-2	Methylene chloride	ND		250	239	96	250	201	80	17	70-130/30
91-20-3	Naphthalene	ND		250	284	114	250	256	102	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	250	240	96	19	70-130/30
100-42-5	Styrene	ND		250	223	89	250	191	76	15	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	228	91	250	194	78	16	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	250	210	84	19	70-130/30
127-18-4	Tetrachloroethene	ND		250	210	84	250	172	69* [b]	20	70-130/30
108-88-3	Toluene	1.5		250	250	99	250	204	81	20	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	234	94	250	202	81	15	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	244	98	250	208	83	16	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	284	114	250	223	89	24	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	242	97	250	202	81	18	70-130/30
79-01-6	Trichloroethene	ND		250	225	90	250	191	76	16	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	314	126	250	155	62* [b]	68* [c]	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	250	229	92	20	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.58	J	250	273	109	250	225	90	19	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	264	106	250	215	86	20	70-130/30
108-05-4	Vinyl Acetate	ND		250	599	240* [d]	250	501	200* [d]	18	70-130/30
75-01-4	Vinyl chloride	ND		250	268	107	250	139	56* [b]	63* [c]	70-130/30
	m,p-Xylene	2.7		500	414	82	500	344	68* [b]	18	70-130/30
95-47-6	o-Xylene	1.2		250	216	86	250	184	73	16	70-130/30
1330-20-7	Xylene (total)	3.9		750	630	83	750	528	70	18	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34267-1, MC34267-2, MC34267-4

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
1868-53-7	Dibromofluoromethane	106%	110%	108%	70-130%
2037-26-5	Toluene-D8	103%	105%	105%	70-130%
460-00-4	4-Bromofluorobenzene	123%	122%	121%	70-130%

(a) Elevated detection limit due to limited sample volume.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.
(d) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Compound	MC34338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	51.7	21* [a]	250	73.9	30* [a]	35* [b]	70-130/30
107-02-8	Acrolein	ND		1250	1080	86	1250	1050	84	3	70-130/30
107-13-1	Acrylonitrile	ND		250	200	80	250	187	75	7	70-130/30
71-43-2	Benzene	0.68		250	213	85	250	216	86	1	70-130/30
108-86-1	Bromobenzene	ND		250	214	86	250	221	88	3	70-130/30
74-97-5	Bromochloromethane	ND		250	202	81	250	215	86	6	70-130/30
75-27-4	Bromodichloromethane	ND		250	223	89	250	240	96	7	70-130/30
75-25-2	Bromoform	ND		250	179	72	250	191	76	6	70-130/30
74-83-9	Bromomethane	ND		250	201	80	250	243	97	19	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	163	65* [a]	250	161	64* [a]	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	242	97	250	252	101	4	70-130/30
135-98-8	sec-Butylbenzene	ND		250	236	94	250	245	98	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	242	97	250	247	99	2	70-130/30
75-15-0	Carbon disulfide	ND		250	196	78	250	193	77	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	211	84	250	213	85	1	70-130/30
108-90-7	Chlorobenzene	ND		250	178	71	250	187	75	5	70-130/30
75-00-3	Chloroethane	ND		250	249	100	250	246	98	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	267	107	250	243	97	9	70-130/30
67-66-3	Chloroform	ND		250	247	99	250	249	100	1	70-130/30
74-87-3	Chloromethane	ND		250	223	89	250	254	102	13	70-130/30
95-49-8	o-Chlorotoluene	ND		250	247	99	250	244	98	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	237	95	250	240	96	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	203	81	250	204	82	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	200	80	250	205	82	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	201	80	250	215	86	7	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	199	80	250	202	81	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	161	64* [a]	250	166	66* [a]	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	252	101	250	239	96	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	249	100	250	253	101	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	220	88	250	219	88	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	229	92	250	222	89	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	214	86	250	210	84	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	212	85	250	215	86	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	182	73	250	192	77	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	310	124	250	299	120	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	228	91	250	227	91	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34267-3

CAS No.	Compound	MC34338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	220	88	250	227	91	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	223	89	250	232	93	4	70-130/30
123-91-1	1,4-Dioxane	ND		625	422	68* a	625	554	89	27	70-130/30
97-63-2	Ethyl methacrylate	ND		250	201	80	250	206	82	2	72-139/30
100-41-4	Ethylbenzene	ND		250	185	74	250	189	76	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	189	76	250	205	82	8	70-130/30
591-78-6	2-Hexanone	ND		250	109	44* a	250	110	44* a	1	70-130/30
98-82-8	Isopropylbenzene	ND		250	243	97	250	244	98	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	223	89	250	228	91	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	217	87	250	219	88	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	172	69* a	250	185	74	7	70-130/30
74-95-3	Methylene bromide	ND		250	199	80	250	202	81	1	70-130/30
75-09-2	Methylene chloride	ND		250	206	82	250	203	81	1	70-130/30
91-20-3	Naphthalene	ND		250	243	97	250	263	105	8	70-130/30
103-65-1	n-Propylbenzene	ND		250	244	98	250	250	100	2	70-130/30
100-42-5	Styrene	ND		250	197	79	250	198	79	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	196	78	250	203	81	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	218	87	250	224	90	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	189	76	250	188	75	1	70-130/30
108-88-3	Toluene	ND		250	208	83	250	215	86	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	205	82	250	213	85	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	204	82	250	223	89	9	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	252	101	250	248	99	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	208	83	250	208	83	0	70-130/30
79-01-6	Trichloroethene	ND		250	201	80	250	202	81	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	222	89	250	227	91	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	234	94	250	248	99	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	226	90	250	239	96	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	224	90	250	225	90	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	484	194* a	250	484	194* a	0	70-130/30
75-01-4	Vinyl chloride	ND		250	190	76	250	190	76	0	70-130/30
	m,p-Xylene	ND		500	358	72	500	363	73	1	70-130/30
95-47-6	o-Xylene	ND		250	187	75	250	188	75	1	70-130/30
1330-20-7	Xylene (total)	0.43	J	750	545	73	750	551	73	1	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

6.3.2

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

MC34267-3

CAS No.	Surrogate Recoveries	MS	MSD	MC34338-3	Limits
1868-53-7	Dibromofluoromethane	107%	105%	101%	70-130%
2037-26-5	Toluene-D8	105%	102%	100%	70-130%
460-00-4	4-Bromofluorobenzene	122%	117%	121%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3916-CC3872	Injection Date:	10/23/14
Lab File ID:	L87837.D	Injection Time:	13:18
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
Upper Limit [a]	424544	8.61	585192	9.43	303612	12.62	311574	15.16	59714	6.35
Lower Limit [b]	106136	7.61	146298	8.43	75903	11.62	77894	14.16	14929	5.35
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3916-BS	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
MSL3916-MB	190403	8.12	261904	8.93	128970	12.12	124846	14.66	22434	5.93
ZZZZZZ	182018	8.12	251932	8.93	124685	12.12	122961	14.66	24885	5.96
MC34267-4	208336	8.12	287887	8.93	138839	12.12	140551	14.66	31153	5.92
MC34231-7	200803	8.12	276986	8.93	141791	12.12	141148	14.66	33957	5.90
MC34231-7MS [c]	216131	8.11	292513	8.93	165287	12.11	155038	14.66	35230	5.86
MC34231-7MSD [c]	188322	8.12	254054	8.93	140069	12.12	133976	14.66	26554	5.86
ZZZZZZ	199173	8.12	283066	8.93	134920	12.12	133206	14.66	27509	5.92
ZZZZZZ	166637	8.12	236442	8.93	115318	12.12	110562	14.66	22910	5.93
ZZZZZZ	202444	8.12	282320	8.93	138421	12.12	134921	14.66	28563	5.95
ZZZZZZ	182268	8.12	260167	8.93	145036	12.12	129631	14.66	61731 [d]	5.88
ZZZZZZ	232116	8.12	336132	8.93	185445	12.12	168626	14.66	61229 [d]	5.90
MC34267-1	264232	8.11	374426	8.93	196834	12.12	183677	14.66	47890	5.91
MC34267-2	223455	8.12	311175	8.93	163831	12.12	158667	14.66	37675	5.90
ZZZZZZ	259470	8.12	355756	8.93	186647	12.12	170686	14.66	38344	5.93
ZZZZZZ	250215	8.12	347171	8.93	177440	12.12	166979	14.66	34567	5.91
ZZZZZZ	244818	8.12	337139	8.93	165096	12.12	161151	14.66	31202	5.91

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) Elevated detection limit due to limited sample volume.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3917-CC3872	Injection Date:	10/24/14
Lab File ID:	L87867.D	Injection Time:	08:30
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	192143	8.12	261493	8.93	147676	12.12	140484	14.66	27949	5.87
Upper Limit [a]	384286	8.62	522986	9.43	295352	12.62	280968	15.16	55898	6.37
Lower Limit [b]	96072	7.62	130747	8.43	73838	11.62	70242	14.16	13975	5.37
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3917-BS	181124	8.12	253266	8.93	141879	12.12	132191	14.66	26497	5.87
MSL3917-MB	216954	8.12	296161	8.93	148354	12.12	143669	14.66	28394	5.90
MC34267-3	181150	8.12	240485	8.93	123969	12.12	121079	14.66	29806	5.91
ZZZZZZ	184428	8.12	259572	8.93	129776	12.12	130952	14.66	23920	5.89
ZZZZZZ	186868	8.12	260370	8.93	129671	12.12	129595	14.66	27977	5.90
MC34338-3	201341	8.12	278870	8.93	144112	12.12	138143	14.66	28384	5.93
ZZZZZZ	174659	8.12	237099	8.93	120360	12.12	120664	14.66	30089	5.89
ZZZZZZ	186263	8.12	254046	8.93	129025	12.12	126480	14.66	28090	5.88
ZZZZZZ	211344	8.12	299419	8.93	148670	12.12	141946	14.66	31223	5.91
MC34338-3MS	211187	8.11	293300	8.93	165846	12.12	158398	14.66	37072	5.87
MC34338-3MSD	209356	8.11	286056	8.93	159226	12.11	153429	14.66	35479	5.86
ZZZZZZ	209986	8.12	293439	8.93	148277	12.12	146633	14.66	28772	5.90
ZZZZZZ	194642	8.12	265209	8.93	135439	12.12	129987	14.66	26020	5.93
ZZZZZZ	188161	8.12	252387	8.93	124972	12.12	124288	14.66	24047	5.92
ZZZZZZ	188744	8.12	255860	8.93	130988	12.12	123443	14.66	26904	5.91
ZZZZZZ	173349	8.12	248039	8.93	126828	12.12	123533	14.66	24518	5.92
ZZZZZZ	149615	8.12	211885	8.93	103835	12.12	100173	14.66	22227	5.94
ZZZZZZ	149889	8.12	214942	8.93	105207	12.12	98671	14.66	21277	5.92
ZZZZZZ	161170	8.11	227527	8.93	112743	12.12	108727	14.66	22571	5.93
ZZZZZZ	167608	8.12	223341	8.93	110416	12.12	109925	14.66	24585	5.93
ZZZZZZ	165747	8.12	226529	8.93	118498	12.12	111656	14.66	28144	5.92

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.

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34267-1	L87855.D	107	105	128
MC34267-2	L87856.D	111	105	127
MC34267-3	L87872.D	97	102	129
MC34267-4	L87842.D	99	98	122
MC34231-7MS	L87844.D	106	103	123
MC34231-7MSD	L87845.D	110	105	122
MC34338-3MS	L87879.D	107	105	122
MC34338-3MSD	L87880.D	105	102	117
MSL3916-BS	L87837.D	106	103	122
MSL3916-MB	L87840.D	102	100	117
MSL3917-BS	L87869.D	113	106	122
MSL3917-MB	L87871.D	102	101	123

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-MB	F76874.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-MB	F76874.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	Result	RL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	57%	30-130%
1718-51-0	Terphenyl-d14	100%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-MB	F76911.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	

7.1.2

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-MB	F76911.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

CAS No.	Compound	Result	RL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40180-MB	I92222.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-1

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	63%	30-130%
1718-51-0	Terphenyl-d14	94%	30-130%

7.1.3

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40191-MB	I92254.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-2, MC34267-3

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-BS	F76875.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.2	36	30-130
95-57-8	2-Chlorophenol	50	41.6	83	30-130
59-50-7	4-Chloro-3-methyl phenol	50	42.9	86	30-130
120-83-2	2,4-Dichlorophenol	50	44.2	88	30-130
105-67-9	2,4-Dimethylphenol	50	39.4	79	30-130
51-28-5	2,4-Dinitrophenol	50	61.5	123	30-130
534-52-1	4,6-Dinitro-o-cresol	50	60.3	121	30-130
95-48-7	2-Methylphenol	50	37.1	74	30-130
	3&4-Methylphenol	100	70.7	71	30-130
88-75-5	2-Nitrophenol	50	45.8	92	30-130
100-02-7	4-Nitrophenol	50	17.0	34	30-130
87-86-5	Pentachlorophenol	50	41.8	84	30-130
108-95-2	Phenol	50	17.4	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	41.1	82	30-130
88-06-2	2,4,6-Trichlorophenol	50	42.4	85	30-130
62-53-3	Aniline	50	30.6	61	40-140
101-55-3	4-Bromophenyl phenyl ether	50	48.9	98	40-140
85-68-7	Butyl benzyl phthalate	50	53.3	107	40-140
100-51-6	Benzyl Alcohol	50	38.3	77	40-140
91-58-7	2-Chloronaphthalene	50	46.2	92	40-140
106-47-8	4-Chloroaniline	50	39.6	79	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.4	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	44.9	90	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	56.0	112	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.5	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	46.6	93	40-140
121-14-2	2,4-Dinitrotoluene	50	52.5	105	40-140
606-20-2	2,6-Dinitrotoluene	50	50.9	102	40-140
91-94-1	3,3'-Dichlorobenzidine	50	49.7	99	40-140
132-64-9	Dibenzofuran	50	44.0	88	40-140
84-74-2	Di-n-butyl phthalate	50	50.4	101	40-140
117-84-0	Di-n-octyl phthalate	50	48.2	96	40-140
84-66-2	Diethyl phthalate	50	48.0	96	40-140
131-11-3	Dimethyl phthalate	50	48.8	98	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	56.1	112	40-140
118-74-1	Hexachlorobenzene	50	47.7	95	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-BS	F76875.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	25.0	50	40-140
67-72-1	Hexachloroethane	50	23.9	48	40-140
78-59-1	Isophorone	50	41.6	83	40-140
88-74-4	2-Nitroaniline	50	49.4	99	40-140
99-09-2	3-Nitroaniline	50	45.7	91	40-140
100-01-6	4-Nitroaniline	50	45.5	91	40-140
98-95-3	Nitrobenzene	50	43.1	86	40-140
62-75-9	n-Nitrosodimethylamine	50	31.5	63	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	49.5	99	40-140
86-30-6	N-Nitrosodiphenylamine	50	47.1	94	40-140
110-86-1	Pyridine	50	27.3	55	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	51%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	107%	15-110%
4165-60-0	Nitrobenzene-d5	83%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	101%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-BS	F76912.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.5	37	30-130
95-57-8	2-Chlorophenol	50	40.9	82	30-130
59-50-7	4-Chloro-3-methyl phenol	50	44.1	88	30-130
120-83-2	2,4-Dichlorophenol	50	43.4	87	30-130
105-67-9	2,4-Dimethylphenol	50	38.9	78	30-130
51-28-5	2,4-Dinitrophenol	50	27.7	55	30-130
534-52-1	4,6-Dinitro-o-cresol	50	30.3	61	30-130
95-48-7	2-Methylphenol	50	36.3	73	30-130
	3&4-Methylphenol	100	70.0	70	30-130
88-75-5	2-Nitrophenol	50	42.9	86	30-130
100-02-7	4-Nitrophenol	50	17.9	36	30-130
87-86-5	Pentachlorophenol	50	43.0	86	30-130
108-95-2	Phenol	50	17.4	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	42.3	85	30-130
88-06-2	2,4,6-Trichlorophenol	50	42.2	84	30-130
62-53-3	Aniline	50	27.2	54	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.2	92	40-140
85-68-7	Butyl benzyl phthalate	50	57.1	114	40-140
100-51-6	Benzyl Alcohol	50	36.9	74	40-140
91-58-7	2-Chloronaphthalene	50	43.9	88	40-140
106-47-8	4-Chloroaniline	50	35.7	71	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	42.7	85	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.8	88	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	56.4	113	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	42.5	85	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.8	88	40-140
121-14-2	2,4-Dinitrotoluene	50	48.8	98	40-140
606-20-2	2,6-Dinitrotoluene	50	49.3	99	40-140
91-94-1	3,3'-Dichlorobenzidine	50	35.0	70	40-140
132-64-9	Dibenzofuran	50	41.7	83	40-140
84-74-2	Di-n-butyl phthalate	50	49.3	99	40-140
117-84-0	Di-n-octyl phthalate	50	56.0	112	40-140
84-66-2	Diethyl phthalate	50	47.7	95	40-140
131-11-3	Dimethyl phthalate	50	47.8	96	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	60.8	122	40-140
118-74-1	Hexachlorobenzene	50	44.0	88	40-140

* = Outside of Control Limits.

7.2.2

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-BS	F76912.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	17.8	36* a	40-140
67-72-1	Hexachloroethane	50	30.4	61	40-140
78-59-1	Isophorone	50	40.0	80	40-140
88-74-4	2-Nitroaniline	50	48.3	97	40-140
99-09-2	3-Nitroaniline	50	47.1	94	40-140
100-01-6	4-Nitroaniline	50	47.1	94	40-140
98-95-3	Nitrobenzene	50	43.1	86	40-140
62-75-9	n-Nitrosodimethylamine	50	30.8	62	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	47.2	94	40-140
86-30-6	N-Nitrosodiphenylamine	50	44.9	90	40-140
110-86-1	Pyridine	50	21.5	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	15-110%
4165-60-0	Nitrobenzene-d5	80%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	99%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.2

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40180-BS	I92223.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	47.1	94	40-140
208-96-8	Acenaphthylene	50	42.5	85	40-140
120-12-7	Anthracene	50	47.5	95	40-140
56-55-3	Benzo(a)anthracene	50	53.2	106	40-140
50-32-8	Benzo(a)pyrene	50	50.7	101	40-140
205-99-2	Benzo(b)fluoranthene	50	52.3	105	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.8	104	40-140
207-08-9	Benzo(k)fluoranthene	50	49.3	99	40-140
218-01-9	Chrysene	50	50.4	101	40-140
53-70-3	Dibenzo(a,h)anthracene	50	51.9	104	40-140
206-44-0	Fluoranthene	50	49.6	99	40-140
86-73-7	Fluorene	50	46.3	93	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	51.3	103	40-140
90-12-0	1-Methylnaphthalene	50	41.2	82	40-140
91-57-6	2-Methylnaphthalene	50	41.3	83	40-140
85-01-8	Phenanthrene	50	49.2	98	40-140
129-00-0	Pyrene	50	47.1	94	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	92%	30-130%
321-60-8	2-Fluorobiphenyl	81%	30-130%
1718-51-0	Terphenyl-d14	97%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40191-BS	I92255.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-2, MC34267-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	45.5	91	40-140
208-96-8	Acenaphthylene	50	40.7	81	40-140
120-12-7	Anthracene	50	46.8	94	40-140
56-55-3	Benzo(a)anthracene	50	54.3	109	40-140
50-32-8	Benzo(a)pyrene	50	51.3	103	40-140
205-99-2	Benzo(b)fluoranthene	50	52.8	106	40-140
191-24-2	Benzo(g,h,i)perylene	50	53.1	106	40-140
207-08-9	Benzo(k)fluoranthene	50	51.1	102	40-140
218-01-9	Chrysene	50	50.6	101	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.5	107	40-140
206-44-0	Fluoranthene	50	48.9	98	40-140
86-73-7	Fluorene	50	38.6	77	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	52.4	105	40-140
90-12-0	1-Methylnaphthalene	50	41.6	83	40-140
91-57-6	2-Methylnaphthalene	50	42.0	84	40-140
85-01-8	Phenanthrene	50	48.3	97	40-140
129-00-0	Pyrene	50	47.3	95	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-MS	F76876.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368
OP40179-MSD	F76877.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368
MC34000-10	F76879.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	MC34000-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	17.9	36	50	19.1	38	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	42.4	85	50	40.9	82	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	45.2	90	50	42.0	84	7	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	46.2	92	50	43.3	87	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	42.2	84	50	38.6	77	9	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	63.8	128	50	62.8	126	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	63.1	126	50	60.4	121	4	30-130/20
95-48-7	2-Methylphenol	ND		50	38.3	77	50	36.0	72	6	30-130/20
	3&4-Methylphenol	ND		100	72.6	73	100	67.5	68	7	30-130/20
88-75-5	2-Nitrophenol	ND		50	47.9	96	50	44.4	89	8	30-130/20
100-02-7	4-Nitrophenol	ND		50	18.5	37	50	16.4	33	12	30-130/20
87-86-5	Pentachlorophenol	ND		50	43.5	87	50	41.7	83	4	30-130/20
108-95-2	Phenol	ND		50	17.6	35	50	16.4	33	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.1	88	50	40.5	81	9	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	44.8	90	50	41.6	83	7	30-130/20
62-53-3	Aniline	ND		50	30.8	62	50	29.8	60	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	50.5	101	50	48.5	97	4	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	54.7	109	50	55.3	111	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	38.5	77	50	37.6	75	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	47.8	96	50	46.4	93	3	40-140/20
106-47-8	4-Chloroaniline	ND		50	41.1	82	50	38.6	77	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	44.7	89	50	42.3	85	6	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	44.1	88	50	44.6	89	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	54.2	108	50	54.9	110	1	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	45.2	90	50	43.5	87	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	49.2	98	50	46.4	93	6	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	53.2	106	50	51.8	104	3	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	52.4	105	50	51.2	102	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	55.2	110	50	52.2	104	6	40-140/20
132-64-9	Dibenzofuran	ND		50	45.3	91	50	43.6	87	4	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	50.7	101	50	48.9	98	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	48.3	97	50	49.0	98	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	48.8	98	50	47.1	94	4	40-140/20
131-11-3	Dimethyl phthalate	ND		50	50.0	100	50	49.1	98	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	58.0	116	50	57.0	114	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	48.1	96	50	46.1	92	4	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40179-MS	F76876.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368
OP40179-MSD	F76877.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368
MC34000-10	F76879.D	1	10/15/14	WK	10/13/14	OP40179	MSF3368

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-1

CAS No.	Compound	MC34000-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	27.0	54	50	26.1	52	3	40-140/20
67-72-1	Hexachloroethane	ND		50	24.2	48	50	27.2	54	12	40-140/20
78-59-1	Isophorone	ND		50	42.3	85	50	40.8	82	4	40-140/20
88-74-4	2-Nitroaniline	ND		50	50.4	101	50	48.9	98	3	40-140/20
99-09-2	3-Nitroaniline	ND		50	47.1	94	50	44.7	89	5	40-140/20
100-01-6	4-Nitroaniline	ND		50	45.6	91	50	45.0	90	1	40-140/20
98-95-3	Nitrobenzene	ND		50	43.6	87	50	43.4	87	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	31.2	62	50	30.7	61	2	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	48.2	96	50	47.6	95	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	48.8	98	50	46.2	92	5	40-140/20
110-86-1	Pyridine	ND		50	27.3	55	50	27.3	55	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-10 Limits	
367-12-4	2-Fluorophenol	49%	51%	48%	15-110%
4165-62-2	Phenol-d5	34%	35%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	107%	106%	94%	15-110%
4165-60-0	Nitrobenzene-d5	83%	85%	77%	30-130%
321-60-8	2-Fluorobiphenyl	75%	77%	61%	30-130%
1718-51-0	Terphenyl-d14	103%	105%	105%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-MS	F76913.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
OP40190-MSD	F76914.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
MC34000-16	F76915.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

7.3.2

CAS No.	Compound	MC34000-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	19.2	38	50	20.1	40	5	30-130/20
95-57-8	2-Chlorophenol	ND		50	38.6	77	50	39.1	78	1	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	41.4	83	50	42.5	85	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	40.8	82	50	42.2	84	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	36.4	73	50	37.3	75	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	22.4	45	50	21.2	42	6	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	26.1	52	50	23.5	47	10	30-130/20
95-48-7	2-Methylphenol	ND		50	34.0	68	50	34.6	69	2	30-130/20
	3&4-Methylphenol	ND		100	66.2	66	100	67.2	67	1	30-130/20
88-75-5	2-Nitrophenol	ND		50	39.7	79	50	40.7	81	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	16.9	34	50	16.9	34	0	30-130/20
87-86-5	Pentachlorophenol	ND		50	41.1	82	50	42.0	84	2	30-130/20
108-95-2	Phenol	ND		50	16.0	32	50	17.3	35	8	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	40.1	80	50	41.6	83	4	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	39.6	79	50	42.1	84	6	30-130/20
62-53-3	Aniline	ND		50	25.3	51	50	27.4	55	8	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	43.0	86	50	44.3	89	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	53.9	108	50	57.1	114	6	40-140/20
100-51-6	Benzyl Alcohol	ND		50	35.0	70	50	36.5	73	4	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	41.1	82	50	44.2	88	7	40-140/20
106-47-8	4-Chloroaniline	ND		50	33.8	68	50	36.7	73	8	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.3	81	50	42.1	84	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	40.6	81	50	43.7	87	7	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	53.0	106	50	56.6	113	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	39.3	79	50	41.8	84	6	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	41.2	82	50	44.0	88	7	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	45.2	90	50	48.2	96	6	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	45.8	92	50	48.6	97	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	35.6	71	50	38.1	76	7	40-140/20
132-64-9	Dibenzofuran	ND		50	38.3	77	50	42.4	85	10	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	46.7	93	50	48.1	96	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	51.6	103	50	53.7	107	4	40-140/20
84-66-2	Diethyl phthalate	ND		50	43.7	87	50	48.4	97	10	40-140/20
131-11-3	Dimethyl phthalate	ND		50	44.1	88	50	48.2	96	9	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	57.9	116	50	60.8	122	5	40-140/20
118-74-1	Hexachlorobenzene	ND		50	41.5	83	50	43.5	87	5	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40190-MS	F76913.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
OP40190-MSD	F76914.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369
MC34000-16	F76915.D	1	10/16/14	WK	10/14/14	OP40190	MSF3369

The QC reported here applies to the following samples: Method: SW846 8270D

MC34267-2, MC34267-3

7.3.2

CAS No.	Compound	MC34000-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	16.0	32* [a]	50	14.8	30* [a]	8	40-140/20
67-72-1	Hexachloroethane	ND		50	28.0	56	50	26.1	52	7	40-140/20
78-59-1	Isophorone	ND		50	37.7	75	50	40.4	81	7	40-140/20
88-74-4	2-Nitroaniline	ND		50	45.0	90	50	49.0	98	9	40-140/20
99-09-2	3-Nitroaniline	ND		50	43.3	87	50	46.2	92	6	40-140/20
100-01-6	4-Nitroaniline	ND		50	44.8	90	50	48.0	96	7	40-140/20
98-95-3	Nitrobenzene	ND		50	40.3	81	50	42.7	85	6	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	28.5	57	50	30.9	62	8	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.7	87	50	46.2	92	6	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	41.6	83	50	43.8	88	5	40-140/20
110-86-1	Pyridine	ND		50	20.3	41	50	22.9	46	12	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-16	Limits
367-12-4	2-Fluorophenol	47%	49%	49%	15-110%
4165-62-2	Phenol-d5	31%	34%	34%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	93%	87%	15-110%
4165-60-0	Nitrobenzene-d5	75%	80%	77%	30-130%
321-60-8	2-Fluorobiphenyl	66%	71%	71%	30-130%
1718-51-0	Terphenyl-d14	97%	98%	101%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40180-MS	I92224.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437
OP40180-MSD	I92225.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437
MC34000-11	I92226.D	1	10/15/14	WK	10/13/14	OP40180	MSI3437

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-1

CAS No.	Compound	MC34000-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	48.0	96	50	46.8	94	3	40-140/20
208-96-8	Acenaphthylene	ND		50	42.9	86	50	42.3	85	1	40-140/20
120-12-7	Anthracene	ND		50	48.1	96	50	47.7	95	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	54.3	109	50	54.1	108	0	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	51.4	103	50	51.0	102	1	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	53.1	106	50	53.7	107	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	53.0	106	50	52.0	104	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	50.6	101	50	48.9	98	3	40-140/20
218-01-9	Chrysene	ND		50	51.1	102	50	51.0	102	0	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	53.1	106	50	52.8	106	1	40-140/20
206-44-0	Fluoranthene	ND		50	49.2	98	50	50.3	101	2	40-140/20
86-73-7	Fluorene	ND		50	48.0	96	50	46.4	93	3	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	52.2	104	50	51.7	103	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	42.8	86	50	43.1	86	1	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	42.7	85	50	42.9	86	0	40-140/20
85-01-8	Phenanthrene	ND		50	50.4	101	50	49.0	98	3	40-140/20
129-00-0	Pyrene	ND		50	48.1	96	50	47.5	95	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-11 Limits	
4165-60-0	Nitrobenzene-d5	91%	93%	87%	30-130%
321-60-8	2-Fluorobiphenyl	79%	82%	67%	30-130%
1718-51-0	Terphenyl-d14	97%	100%	97%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40191-MS	I92256.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438
OP40191-MSD	I92257.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438
MC34000-17	I92258.D	1	10/16/14	WK	10/14/14	OP40191	MSI3438

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34267-2, MC34267-3

CAS No.	Compound	MC34000-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	42.8	86	50	45.4	91	6	40-140/20
208-96-8	Acenaphthylene	ND		50	38.8	78	50	40.8	82	5	40-140/20
120-12-7	Anthracene	ND		50	44.5	89	50	46.4	93	4	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	51.5	103	50	53.0	106	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	48.0	96	50	50.0	100	4	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	48.9	98	50	53.5	107	9	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	50.4	101	50	52.1	104	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	49.3	99	50	47.5	95	4	40-140/20
218-01-9	Chrysene	ND		50	48.6	97	50	50.1	100	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	51.1	102	50	52.6	105	3	40-140/20
206-44-0	Fluoranthene	ND		50	46.4	93	50	48.0	96	3	40-140/20
86-73-7	Fluorene	ND		50	35.6	71	50	37.3	75	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	49.9	100	50	51.4	103	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	40.1	80	50	42.2	84	5	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	39.9	80	50	42.6	85	7	40-140/20
85-01-8	Phenanthrene	ND		50	45.5	91	50	48.3	97	6	40-140/20
129-00-0	Pyrene	ND		50	45.1	90	50	46.4	93	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-17	Limits
4165-60-0	Nitrobenzene-d5	82%	87%	85%	30-130%
321-60-8	2-Fluorobiphenyl	74%	78%	79%	30-130%
1718-51-0	Terphenyl-d14	85%	87%	87%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3368-CC3361	Injection Date:	10/15/14
Lab File ID:	F76861.D	Injection Time:	08:03
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	57384	4.28	197693	5.33	134143	6.86	258606	8.15	345651	10.76	332367	12.48
Upper Limit [a]	114768	4.78	395386	5.83	268286	7.36	517212	8.65	691302	11.26	664734	12.98
Lower Limit [b]	28692	3.78	98847	4.83	67072	6.36	129303	7.65	172826	10.26	166184	11.98

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	71665	4.28	246385	5.33	167113	6.86	325680	8.15	402373	10.76	392931	12.48
ZZZZZZ	69939	4.28	243337	5.33	165599	6.86	321743	8.15	398837	10.76	396894	12.48
ZZZZZZ	74647	4.28	263865	5.33	180720	6.86	354191	8.15	440678	10.75	427673	12.48
ZZZZZZ	74003	4.28	262556	5.33	180755	6.86	355107	8.15	446471	10.75	436502	12.48
ZZZZZZ	75438	4.28	262637	5.33	177433	6.86	345308	8.14	433375	10.75	422218	12.48
ZZZZZZ	72889	4.28	253755	5.33	176721	6.86	354658	8.15	474758	10.76	461866	12.48
ZZZZZZ	75845	4.28	258734	5.33	174739	6.86	340112	8.15	428577	10.75	423170	12.48
ZZZZZZ	69757	4.28	238519	5.33	164749	6.86	327277	8.14	413982	10.75	413611	12.47
OP40171-MB	70761	4.28	244248	5.33	162690	6.86	306689	8.14	368555	10.75	334803	12.47
OP40171-BS	73499	4.28	249690	5.33	162664	6.86	306043	8.14	375768	10.75	350384	12.47
ZZZZZZ	69623	4.28	238520	5.33	159514	6.86	302652	8.14	357078	10.75	337561	12.47
ZZZZZZ	72179	4.28	248752	5.33	164796	6.86	316512	8.14	375106	10.75	355677	12.47
OP40179-MB	66740	4.28	234406	5.33	162893	6.86	326327	8.14	425832	10.75	416353	12.47
OP40179-BS	66356	4.28	236002	5.33	159795	6.86	306699	8.14	412674	10.75	398064	12.47
OP40179-MS	67759	4.28	233134	5.33	154275	6.86	294111	8.14	380377	10.75	372789	12.47
OP40179-MSD	66607	4.28	233440	5.33	155801	6.86	299697	8.14	384513	10.75	374380	12.47
MC34000-10	65921	4.28	227306	5.33	152260	6.86	298225	8.14	364025	10.75	364457	12.47
ZZZZZZ	67599	4.28	240203	5.33	172815	6.86	339608	8.14	469336	10.76	504661	12.49
ZZZZZZ	76196	4.28	260271	5.33	189518	6.86	356497	8.14	437708	10.75	425482	12.47
MC34267-1	70308	4.28	251615	5.33	167733	6.86	327804	8.14	404871	10.75	405864	12.47
OP40178-MB	67752	4.27	230475	5.33	148304	6.86	289753	8.14	336590	10.75	333829	12.47
OP40178-BS	66330	4.28	228868	5.33	147311	6.86	273264	8.14	325835	10.75	312580	12.47
OP40178-MS	61027	4.27	205535	5.33	142595	6.86	288847	8.14	483695	10.76	617804	12.50
OP40178-MSD	64169	4.28	220697	5.33	153650	6.86	313593	8.14	604303	10.77	647198	12.53
MC34232-6	68378	4.28	235273	5.33	160665	6.86	326479	8.15	601888	10.77	656262	12.52
OP40210-MB	83338	4.28	288296	5.33	194903	6.86	385184	8.14	517420	10.75	565205	12.48
OP40210-LB	83338	4.28	288296	5.33	194903	6.86	385184	8.14	517420	10.75	565205	12.48
OP40210-BS	80711	4.28	279186	5.33	185298	6.86	357137	8.15	477505	10.76	517400	12.48
OP40210-MS	78813	4.28	273149	5.33	177454	6.86	345532	8.15	450674	10.75	485538	12.48
OP40210-MSD	75124	4.28	256926	5.33	173898	6.86	331957	8.15	440305	10.75	464855	12.48

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3368-CC3361	Injection Date:	10/15/14
Lab File ID:	F76861.D	Injection Time:	08:03
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3369-CC3361	Injection Date:	10/16/14
Lab File ID:	F76894.D	Injection Time:	07:57
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	65919	4.25	225264	5.30	149969	6.83	289158	8.12	378850	10.72	374006	12.44
Upper Limit [a]	131838	4.75	450528	5.80	299938	7.33	578316	8.62	757700	11.22	748012	12.94
Lower Limit [b]	32960	3.75	112632	4.80	74985	6.33	144579	7.62	189425	10.22	187003	11.94
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC34241-1	80745	4.25	281996	5.30	185634	6.83	359758	8.12	442397	10.72	447428	12.44
ZZZZZZ	74411	4.25	258750	5.30	176157	6.83	341870	8.12	407518	10.72	402680	12.44
OP40201-MB	85308	4.25	291223	5.30	197093	6.83	379951	8.12	437471	10.72	412231	12.44
OP40201-BS	85781	4.25	296313	5.31	191111	6.83	347712	8.12	409833	10.72	381091	12.44
ZZZZZZ	75575	4.25	265690	5.30	174323	6.83	332405	8.12	378720	10.72	354087	12.44
ZZZZZZ	83775	4.25	287614	5.30	187208	6.83	346970	8.12	388792	10.72	364614	12.44
ZZZZZZ	81194	4.25	278593	5.30	187596	6.83	354504	8.12	399009	10.72	367307	12.44
ZZZZZZ	98815	4.25	350980	5.30	227604	6.83	418094	8.12	444426	10.72	417355	12.44
ZZZZZZ	70191	4.25	238108	5.30	157061	6.83	292436	8.11	334661	10.71	315913	12.43
OP40195-MB	75377	4.25	258724	5.30	172817	6.83	334241	8.12	412893	10.72	405373	12.44
OP40195-BS	78321	4.25	272941	5.30	176842	6.83	332801	8.12	416966	10.72	412111	12.44
OP40195-MS	72461	4.25	247990	5.30	163751	6.83	306575	8.12	392081	10.72	383571	12.44
OP40195-MSD	72687	4.25	252249	5.30	165088	6.83	309189	8.12	389643	10.72	386394	12.44
MC34000-18	71416	4.25	245445	5.30	162024	6.83	313936	8.12	380446	10.71	386290	12.43
ZZZZZZ	66726	4.25	228618	5.30	154085	6.83	299473	8.12	410818	10.71	355925	12.43
ZZZZZZ	64027	4.25	224171	5.30	153278	6.83	320493	8.11	370582	10.71	317778	12.43
OP40190-MB	70793	4.25	245478	5.30	166314	6.83	342068	8.12	426152	10.71	376345	12.43
OP40190-BS	69821	4.25	241439	5.30	165138	6.83	331106	8.12	420090	10.72	361436	12.44
OP40190-MS	69257	4.25	243247	5.30	165756	6.83	330047	8.12	416474	10.72	366916	12.44
OP40190-MSD	66569	4.25	228946	5.30	153813	6.83	313717	8.12	390479	10.72	344567	12.43
MC34000-16	66267	4.25	227048	5.30	155684	6.83	321630	8.11	386873	10.72	347951	12.43
MC34267-2	73231	4.25	255537	5.30	182052	6.83	346601	8.12	422424	10.71	364132	12.43
MC34267-3	70724	4.25	246305	5.30	172624	6.83	362458	8.12	450140	10.72	392654	12.44
ZZZZZZ	70681	4.25	245039	5.30	169170	6.83	342391	8.11	414290	10.71	368255	12.43
ZZZZZZ	67905	4.25	227420	5.30	156720	6.83	326058	8.12	394885	10.71	350019	12.43
ZZZZZZ	62524	4.25	208008	5.30	132244	6.83	261201	8.12	343469	10.71	288014	12.43

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.2

7

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3369-CC3361	Injection Date:	10/16/14
Lab File ID:	F76894.D	Injection Time:	07:57
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3437-CC3427	Injection Date:	10/15/14
Lab File ID:	I92221.D	Injection Time:	08:17
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	302439	3.05	681720	4.08	396102	5.57	695363	6.83	584680	9.54	1148329	10.93
Upper Limit [a]	604878	3.55	1363440	4.58	792204	6.07	1390726	7.33	1169360	10.04	2296658	11.43
Lower Limit [b]	151220	2.55	340860	3.58	198051	5.07	347682	6.33	292340	9.04	574165	10.43
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40180-MB	361388	3.05	820038	4.08	473688	5.57	829692	6.83	704041	9.54	1400322	10.92
OP40180-BS	344631	3.05	790580	4.08	455736	5.57	801153	6.83	670782	9.55	1340127	10.93
OP40180-MS	328423	3.05	758183	4.08	437430	5.57	774902	6.83	646778	9.55	1288423	10.93
OP40180-MSD	330041	3.05	760335	4.08	440767	5.57	784373	6.83	648425	9.55	1287080	10.93
MC34000-11	309530	3.05	701829	4.08	403129	5.57	711259	6.83	590007	9.54	1200457	10.92
ZZZZZZ	303301	3.05	688694	4.08	391449	5.57	700868	6.83	605413	9.57	1208596	10.96
MC34267-1	308680	3.05	711463	4.08	409272	5.57	712684	6.83	599200	9.55	1204521	10.92
ZZZZZZ	327976	3.05	744192	4.08	431751	5.57	748584	6.83	624898	9.54	1236408	10.92
OP40183-MB	400115	3.05	919137	4.08	527813	5.57	907213	6.83	727740	9.54	1393689	10.92
OP40183-BS	305465	3.06	709078	4.08	407034	5.57	719770	6.83	570015	9.55	1077292	10.92
OP40183-MS	290269	3.05	658429	4.08	376353	5.57	655356	6.83	498616	9.57	882483	10.98
OP40183-MSD	295801	3.05	669199	4.08	383589	5.57	659167	6.83	435210	9.59	686665	11.03
MC34000-12	287286	3.05	657482	4.08	375173	5.57	652574	6.83	450289	9.59	752044	11.02
ZZZZZZ	338423	3.06	774241	4.08	439721	5.58	746697	6.83	574987	9.55	1105101	10.93
ZZZZZZ	370149	3.05	842271	4.08	479646	5.58	813990	6.83	629517	9.55	1200025	10.93
ZZZZZZ	373481	3.05	854806	4.08	483220	5.57	826380	6.83	620232	9.55	1157303	10.93
ZZZZZZ	383050	3.05	872772	4.08	495121	5.57	843351	6.83	623308	9.55	1129024	10.93
ZZZZZZ	402921	3.05	915688	4.08	518534	5.57	877428	6.83	642732	9.55	1170584	10.93
ZZZZZZ	302994	3.05	701371	4.08	406273	5.57	699206	6.83	583936	9.55	1103086	10.92
OP40014-MB	341685	3.05	787626	4.08	458124	5.57	807143	6.83	659770	9.55	1276961	10.93
OP40014-BS	348189	3.05	800365	4.08	463805	5.58	813729	6.83	650981	9.55	1241780	10.93
ZZZZZZ	353180	3.05	816773	4.08	473160	5.57	816425	6.83	679654	9.55	1314236	10.93
ZZZZZZ	338121	3.05	777909	4.08	447860	5.57	788966	6.83	645359	9.54	1243745	10.93
ZZZZZZ	333801	3.05	759837	4.08	440969	5.57	769460	6.83	639518	9.54	1230636	10.92
ZZZZZZ	358520	3.05	815833	4.08	468185	5.57	807386	6.83	684882	9.55	1302791	10.92
ZZZZZZ	340008	3.05	769741	4.08	445584	5.57	773362	6.83	645021	9.54	1245276	10.92
ZZZZZZ	366828	3.05	834960	4.08	483933	5.57	824726	6.83	683458	9.54	1314385	10.92

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3437-CC3427	Injection Date:	10/15/14
Lab File ID:	I92221.D	Injection Time:	08:17
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3438-CC3427	Injection Date:	10/16/14
Lab File ID:	I92253.D	Injection Time:	08:33
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	249729	3.03	572330	4.06	335443	5.55	595475	6.80	496452	9.52	976445	10.90
Upper Limit [a]	499458	3.53	1144660	4.56	670886	6.05	1190950	7.30	992904	10.02	1952890	11.40
Lower Limit [b]	124865	2.53	286165	3.56	167722	5.05	297738	6.30	248226	9.02	488223	10.40
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40191-MB	271952	3.03	624568	4.05	365459	5.55	638115	6.80	554432	9.52	1110964	10.90
OP40191-BS	273974	3.03	640717	4.06	371423	5.55	663374	6.81	557111	9.52	1098695	10.90
OP40191-MS	224917	3.03	522792	4.06	305307	5.55	540149	6.81	454910	9.52	905006	10.90
OP40191-MSD	258408	3.03	601450	4.06	350996	5.55	620797	6.81	524141	9.52	1040353	10.90
MC34000-17	190722	3.03	435413	4.05	253441	5.55	452547	6.80	377148	9.51	762491	10.89
MC34267-2	158227	3.03	363307	4.06	205683	5.55	370379	6.81	307367	9.51	620573	10.89
MC34267-3	156957	3.03	361412	4.05	208362	5.55	365849	6.80	309330	9.51	625184	10.89
ZZZZZZ	182754	3.03	424270	4.05	245276	5.55	428013	6.80	361308	9.51	724867	10.89
ZZZZZZ	136137	3.03	312855	4.05	182667	5.55	319483	6.79	264862	9.51	533715	10.89
ZZZZZZ	174542	3.03	401341	4.05	235927	5.55	419955	6.80	364184	9.51	720680	10.89
ZZZZZZ	179327	3.03	411293	4.05	239087	5.55	421019	6.79	351942	9.51	702773	10.89
ZZZZZZ	173612	3.03	394101	4.05	230227	5.55	407006	6.79	339681	9.51	675902	10.89
ZZZZZZ	190277	3.03	438149	4.05	255581	5.55	452105	6.80	379992	9.51	759634	10.89
ZZZZZZ	141956	3.03	324613	4.05	189496	5.55	330118	6.79	274455	9.51	544258	10.89
ZZZZZZ	148754	3.03	338474	4.05	196567	5.55	347944	6.79	290971	9.51	574807	10.89
ZZZZZZ	161370	3.03	367871	4.05	217637	5.55	373513	6.79	324184	9.51	647294	10.89
OP40186-MB	252082	3.03	582190	4.05	341512	5.55	606012	6.80	501536	9.51	967990	10.89
ZZZZZZ	121727*	3.03	277291*	4.05	161245*	5.55	283841*	6.79	235184*	9.51	462336*	10.89
ZZZZZZ	115654*	3.03	269419*	4.05	156501*	5.55	278113*	6.79	231711*	9.50	456751*	10.89
ZZZZZZ	165493	3.03	378414	4.05	220970	5.55	392142	6.79	328655	9.51	650703	10.89
ZZZZZZ	120985*	3.02	277482*	4.05	161976*	5.55	288996*	6.79	241255*	9.50	478776*	10.89
ZZZZZZ	105036*	3.02	242013*	4.05	140114*	5.55	248574*	6.79	203786*	9.51	400634*	10.88
ZZZZZZ	188398	3.03	431311	4.05	253399	5.55	443639	6.79	371690	9.51	734814	10.89
ZZZZZZ	135522	3.02	312145	4.05	182106	5.55	320865	6.79	269609	9.51	532382	10.89
ZZZZZZ	146347	3.02	335884	4.05	195691	5.55	345963	6.79	290429	9.51	567381	10.89
MSI3438-BS1	153291	3.02	351245	4.05	205450	5.55	364899	6.79	303780	9.51	594991	10.89
MSI3438-BS2	145463	3.02	331021	4.05	194503	5.55	340247	6.79	285387	9.51	561080	10.89
MSI3438-BS3	156754	3.02	360333	4.05	210902	5.55	372904	6.79	316070	9.51	624341	10.89
MSI3438-BS4	159410	3.03	364672	4.05	211521	5.55	377816	6.79	313680	9.51	612033	10.89
MSI3438-BS5	178632	3.03	415565	4.05	243150	5.55	433842	6.79	375230	9.51	747717	10.89

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10

7.4.4

Semivolatile Internal Standard Area Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3438-CC3427	Injection Date:	10/16/14
Lab File ID:	I92253.D	Injection Time:	08:33
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.4

Semivolatile Surrogate Recovery Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34267-1	F76882.D	50	33	106	86	68	105
MC34267-2	F76916.D	64	38	100	84	71	96
MC34267-3	F76917.D	52	36	95	78	70	93
OP40179-BS	F76875.D	51	36	107	83	76	101
OP40179-MB	F76874.D	49	32	98	78	57	100
OP40179-MS	F76876.D	49	34	107	83	75	103
OP40179-MSD	F76877.D	51	35	106	85	77	105
OP40190-BS	F76912.D	48	34	94	80	69	99
OP40190-MB	F76911.D	50	34	88	78	71	96
OP40190-MS	F76913.D	47	31	92	75	66	97
OP40190-MSD	F76914.D	49	34	93	80	71	98

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34267-1	I92229.D	84	72	97
MC34267-2	I92259.D	86	76	84
MC34267-3	I92260.D	84	79	82
OP40180-BS	I92223.D	92	81	97
OP40180-MB	I92222.D	85	63	94
OP40180-MS	I92224.D	91	79	97
OP40180-MSD	I92225.D	93	82	100
OP40191-BS	I92255.D	85	78	88
OP40191-MB	I92254.D	85	78	85
OP40191-MS	I92256.D	82	74	85
OP40191-MSD	I92257.D	87	78	87

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MB	BB59914.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34267-1, MC34267-2, MC34267-3, MC34267-5

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	100%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-BS	BB59915.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34267-1, MC34267-2, MC34267-3, MC34267-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.078	110	60-140
106-93-4	1,2-Dibromoethane	0.071	0.068	96	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	90%	36-173%
460-00-4	Bromofluorobenzene (S)	93%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MS	BB59916.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
OP40218-MSD	BB59917.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
MC34000-20	BB59918.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34267-1, MC34267-2, MC34267-3, MC34267-5

CAS No.	Compound	MC34000-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.081	114	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.074	104	0.071	0.072	101	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-20	Limits
460-00-4	Bromofluorobenzene (S)	75%	70%	68%	36-173%
460-00-4	Bromofluorobenzene (S)	75%	71%	68%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34267-1	BB59919.D	70	78
MC34267-2	BB59920.D	53	86
MC34267-3	BB59921.D	66	76
MC34267-5	BB59922.D	73	77
OP40218-BS	BB59915.D	90	93
OP40218-MB	BB59914.D	100	101
OP40218-MS	BB59916.D	75	75
OP40218-MSD	BB59917.D	70	71

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34267
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3334-ICC3334	Injection Date:	10/16/14
Lab File ID:	BB59910.D	Injection Time:	09:22
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40218-MB	BB59914.D	10/16/14	10:43	3.45	3.47
OP40218-BS	BB59915.D	10/16/14	11:01	3.45	3.46
OP40218-MS	BB59916.D	10/16/14	11:19	3.45	3.46
OP40218-MSD	BB59917.D	10/16/14	11:37	3.45	3.46
MC34000-20	BB59918.D	10/16/14	11:55	3.45	3.46
MC34267-1	BB59919.D	10/16/14	12:13	3.45	3.46
MC34267-2	BB59920.D	10/16/14	12:30	3.45	3.46
MC34267-3	BB59921.D	10/16/14	12:48	3.45	3.46
MC34267-5	BB59922.D	10/16/14	13:06	3.45	3.46
ZZZZZZ	BB59923.D	10/16/14	13:24	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34289

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/12/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
P56-ROX-101314	TB-ROX-101314-HCL
TB-ROX-101314-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated di-n-butyl phthalate was detected in the method blank. VOC and SVOC LCS recoveries were outside evaluation criteria. Tert butyl alcohol-d_9 internal standard area recovery was outside criteria in sample P56-ROX-101314. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for vinyl acetate exceeded 30 percent difference (%D). Also, the continuing calibration verification for vinyl acetate exceeded 40%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.8ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP40208-MB	SVOCs	Di-n-butyl phthalate	0.24 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P56-ROX-101314	SVOCs	Di-n-butyl phthalate	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSL3914-BS	VOCs	Acetone	**61**	70-130
MSL3914-BS	VOCs	Dichlorodifluoromethane	**68**	70-130
MSL3914-BS	VOCs	2-Hexanone	**60**	70-130
MSL3916-BS	VOCs	Acetone	**63**	70-130
MSL3916-BS	VOCs	Dichlorodifluoromethane	**64**	70-130
MSL3916-BS	VOCs	1,4-Dioxane	**190**	70-130
MSL3916-BS	VOCs	2-Hexanone	**63**	70-130
MSL3916-BS	VOCs	Vinyl acetate	**178**	70-130
OP40208-BS	SVOCs	Hexachlorocyclopentadiene	**27**	40-140
OP40208-BS	SVOCs	Pyridine	**21**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSL3914-BS was associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P56-ROX-101314	VOCs	Acetone	**UJ**
P56-ROX-101314	VOCs	Dichlorodifluoromethane	**UJ**
P56-ROX-101314	VOCs	2-Hexanone	**UJ**
P56-ROX-101314	SVOCs	Hexachlorocyclopentadiene	**UJ**
P56-ROX-101314	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P56-ROX-101314	VOCs	Tert butyl alcohol-d_9	**61229**	14929-59714

Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. There were no target analytes associated with tert butyl alcohol-d_9; therefore, no qualification of data was required based on tert butyl alcohol-d_9.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

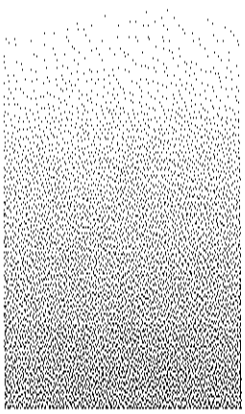
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

10/31/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34289

Sampling Date: 10/13/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **66**

Reviewed on 11/12/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34289

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34289-1	10/13/14	09:50 MM	10/14/14	AQ	Ground Water	P56-ROX-101314
MC34289-2	10/13/14	00:00 MM	10/14/14	AQ	Trip Blank Water	TB-ROX-101314-HCL
MC34289-3	10/13/14	00:00 MM	10/14/14	AQ	Trip Blank Water	TB-ROX-101314-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34289
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	10/27/2014 4:31:45 PM

1 Sample and 2 Trip Blank(s) were collected on 10/13/2014 and were received at Accutest on 10/14/2014 properly preserved, at 0.8 Deg. C and intact. These Samples received an Accutest job number of MC34289. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ **Batch ID:** MSL3914

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34462-6MS, MC34462-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2,2-Dichloropropane, 2-Butanone (MEK), 2-Hexanone, Acetone, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample MC34462-6MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Initial calibration verification standard MSL3909-ICV3872 for vinyl acetate exceed 30% difference (response biased high). Associated samples are non-detect for this compound.
- Continuing alibration standard MSL3914-CC3872 for vinyl acetate exceed 40% difference (response biased high). Associated samples are non-detect for this compound..

Matrix AQ **Batch ID:** MSL3916

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Chloroethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, m,p-Xylene, Tetrachloroethene, 2-Butanone (MEK), Acrolein, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acrolein, Bromomethane, Chloroethane, Chloromethane, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits for sample MC34231-7MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing alibration standard MSL3916-CC3872 for vinyl acetate exceed 40% difference (response biased high). Associated samples are non-detect for this compound.
- MC34231-7MS/MSD: Elevated detection limit due to limited sample volume.
- MC34231-7MS/MSD for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- MSL3916-BS for 1,4-Dioxane, Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.

Volatiles by GCMS By Method SW846 8260C

Matrix AQ	Batch ID: MSL3916

- MC34289-1 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP40208

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-7MS, MC34000-7MSD were used as the QC samples indicated.
- Sample(s) MC34289-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- OP40208-BS/MS/MSD Recovery(s) for Hexachlorocyclopentadiene, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- RPD(s) for MSD for Pyridine are outside control limits for sample OP40208-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP40209

- 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.
- Sample(s) MC34000-19MS, MC34000-19MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40218

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-20MS, MC34000-20MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

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(MC34289).

Summary of Hits

Job Number: MC34289
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/13/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34289-1	P56-ROX-101314					
Benzene		107	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene		6.2	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		4.0 J	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		1.2 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		164	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		64.5	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		3.5 J	5.0	0.37	ug/l	SW846 8260C
Naphthalene		67.9	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		70.9	5.0	0.49	ug/l	SW846 8260C
Toluene		18.3	1.0	0.33	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		65.7	5.0	0.32	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		19.4	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		170	1.0	0.93	ug/l	SW846 8260C
o-Xylene		6.6	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		176	1.0	0.36	ug/l	SW846 8260C
Dibenzofuran		0.55 J	2.2	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.35 JB~~ U	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		1.0 J	2.2	0.36	ug/l	SW846 8270D
Acenaphthene		0.57	0.11	0.074	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.11	0.11	0.053	ug/l	SW846 8270D BY SIM
Anthracene		0.12	0.11	0.099	ug/l	SW846 8270D BY SIM
Fluorene		0.41	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		23.5	2.2	0.54	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		29.6	2.2	0.54	ug/l	SW846 8270D BY SIM
Phenanthrene		1.5	0.054	0.014	ug/l	SW846 8270D BY SIM
MC34289-2	TB-ROX-101314-HCL					
No hits reported in this sample.						
MC34289-3	TB-ROX-101314-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87853.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	107	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	6.2	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	4.0	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	1.2	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	UJ
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	164	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	64.5	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	3.5	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	67.9	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	70.9	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	18.3	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	65.7	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	19.4	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	170	1.0	0.93	ug/l	
95-47-6	o-Xylene	6.6	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	176	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	127%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40381.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.89	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.4	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.57	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.60	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	0.55	2.2	0.28	ug/l	J
84-74-2	Di-n-butyl phthalate	~~0.35~~ 4	5.4	0.19	ug/l	JB 4
117-84-0	Di-n-octyl phthalate	ND	5.4	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	2.2	0.36	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.32	ug/l	
78-59-1	Isophorone	ND	5.4	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	46%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92294.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.57	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	0.11	0.11	0.053	ug/l	
120-12-7	Anthracene	0.12	0.11	0.099	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.41	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	23.5	2.2	0.54	ug/l	
91-57-6	2-Methylnaphthalene	29.6	2.2	0.54	ug/l	
85-01-8	Phenanthrene	1.5	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

ND = Not detected MDL = Method Detection Limit
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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:	P56-ROX-101314		
Lab Sample ID:	MC34289-1	Date Sampled:	10/13/14
Matrix:	AQ - Ground Water	Date Received:	10/14/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59923.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	68%		36-173%
460-00-4	Bromofluorobenzene (S)	95%		36-173%

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:	TB-ROX-101314-HCL		
Lab Sample ID:	MC34289-2	Date Sampled:	10/13/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87803.D	1	10/22/14	GK	n/a	n/a	MSL3914
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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RL = Reporting Limit
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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:	TB-ROX-101314-HCL		
Lab Sample ID:	MC34289-2	Date Sampled:	10/13/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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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:	TB-ROX-101314-HCL		
Lab Sample ID:	MC34289-2	Date Sampled:	10/13/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	123%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101314-ST		
Lab Sample ID:	MC34289-3	Date Sampled:	10/13/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/14/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59925.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	68%		36-173%
460-00-4	Bromofluorobenzene (S)	74%		36-173%

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

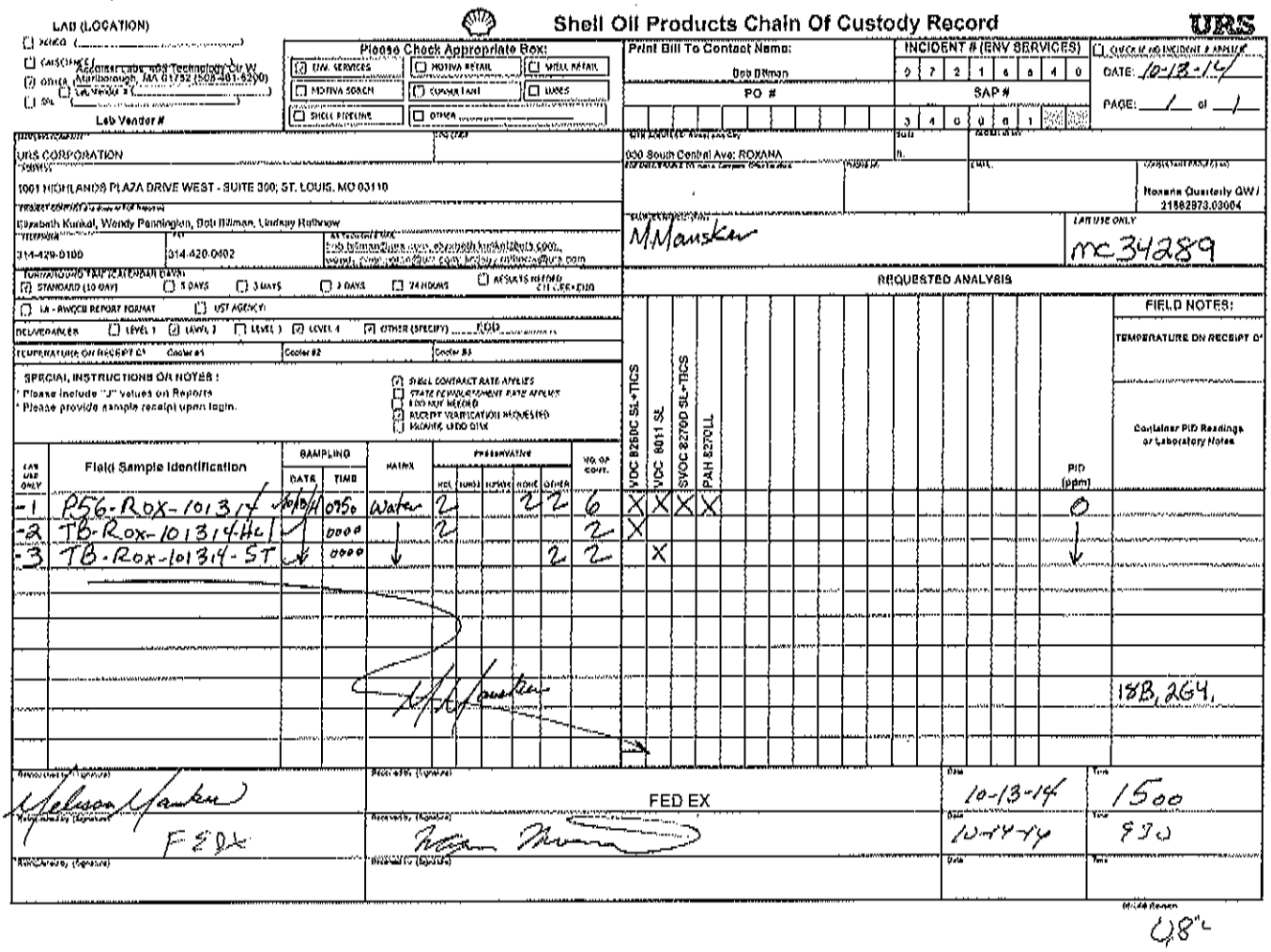
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
☐ XENCO (_____)
☐ CASCHEM (Acton, MA) ☐ Test America (Canton, OH) ☐ Test America (Irvine, CA)
☐ Test America (Nashville, TN) ☐ Test America (Savannah, GA) ☐ Test America (St. Louis, MO)
☑ Other Accutest Technology, Cir W Auburnborough, MA 01752 (508-481-6200)
☐ SAL ☐ Lab Vendor # (_____)
Lab Vendor #

Please Check Appropriate Box:
☑ EMI SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOAC/H ☐ COMMERCIAL ☐ UNES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #
INCIDENT # (ENV SERVICES): 9 7 2 1 6 8 4 0
SAP #: 3 4 0 0 0 0 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10-13-14
PAGE: 1 of 1

URS CORPORATION
1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110
Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathbone
314-429-0100 | 314-429-0462 | Bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy_pennington@urs.com, lindsay_rathbone@urs.com
000 South Central Ave; ROXANA
Roxana Quarterly GW / 21582973.03004
M.Mansker
LAB USE ONLY: MC34289

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON (DATE)
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD
TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ COD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ MONITOR GROUNDWATER

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE H2SO4	PRESERVATIVE HNO3	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	FIELD NOTES: Container PID Readings or Laboratory Notes
-1	RSG-ROX-101314	10/13/14	0950	Water	2			2	2	6	X	X	X	X	0	
-2	TB-ROX-101314-HCL	↓	0000	↓	2					2	X				↓	
-3	TB-ROX-101314-ST	↓	0000	↓					2	2		X				
																18B, 264,

TEMPERATURE ON RECEIPT C°: 0.8°C

Relinquished (Signature): Melissa Mansker — Received (Signature): FED EX — Date: 10-13-14 — Time: 1500
Relinquished (Signature): FED EX — Received (Signature): [signature] — Date: 10-14-14 — Time: 830
Relinquished (Signature): — Received (Signature): — Date: — Time:

5.1

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34289 Client: URS Project: 900 SOUTH CENTRAL

Date / Time Received: 10/14/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (0.8/0.8);

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	1

Quality Control Preservation	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

51 G1

MC34289: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34289

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34289-1 Collected: 13-OCT-14 09:50 By: MM Received: 14-OCT-14 By: P56-ROX-101314						
MC34289-1	SW846 8011	16-OCT-14 13:24	NK	15-OCT-14	NE	V8011SL
MC34289-1	SW846 8270D BY SIM	17-OCT-14 10:24	WK	15-OCT-14	PA	B8270SIMSL
MC34289-1	SW846 8270D	17-OCT-14 14:33	WK	15-OCT-14	PA	AB8270SL+
MC34289-1	SW846 8260C	23-OCT-14 21:19	GK			V8260SL+
MC34289-2 Collected: 13-OCT-14 00:00 By: MM Received: 14-OCT-14 By: TB-ROX-101314-HCL						
MC34289-2	SW846 8260C	22-OCT-14 19:41	GK			V8260SL+
MC34289-3 Collected: 13-OCT-14 00:00 By: MM Received: 14-OCT-14 By: TB-ROX-101314-ST						
MC34289-3	SW846 8011	16-OCT-14 14:00	NK	15-OCT-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/14/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34289-1.1	Walk In Ref #22	Alireza Zeighami	10/15/14 11:03	Retrieve from Storage
MC34289-1.1	Alireza Zeighami		10/15/14 11:04	Depleted
MC34289-1.3	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34289-1.3	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument
MC34289-1.3	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34289-1.3	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34289-1.4	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34289-1.4	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34289-1.4	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34289-1.4	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34289-1.5	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage
MC34289-2.2	VOC Ref #2	Gary Krasinski	10/22/14 11:56	Retrieve from Storage
MC34289-2.2	Gary Krasinski	GCMSL	10/22/14 11:56	Load on Instrument
MC34289-2.2	GCMSL	Gary Krasinski	10/23/14 12:33	Unload from Instrument
MC34289-2.2	Gary Krasinski	VOC Ref #2	10/23/14 12:34	Return to Storage
MC34289-3.1	VOC Ref #2	Marc Tahtamoni	10/15/14 14:33	Retrieve from Storage

5.3

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: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-MB	L87788.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	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	
74-97-5	Bromochloromethane	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	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	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	
124-48-1	Dibromochloromethane	ND	1.0	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	

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-MB	L87788.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	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	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	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	
108-05-4	Vinyl Acetate	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	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-MB	L87788.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	124%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	10	ug/l	
107-02-8	Acrolein	ND	25	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	
74-97-5	Bromochloromethane	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	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	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	
124-48-1	Dibromochloromethane	ND	1.0	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	

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	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	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	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	
108-05-4	Vinyl Acetate	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	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	117%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-BS	L87785.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	30.3	61* a	70-130
107-02-8	Acrolein	250	184	74	70-130
107-13-1	Acrylonitrile	50	36.0	72	70-130
71-43-2	Benzene	50	46.5	93	70-130
108-86-1	Bromobenzene	50	51.5	103	70-130
74-97-5	Bromochloromethane	50	50.3	101	70-130
75-27-4	Bromodichloromethane	50	51.3	103	70-130
75-25-2	Bromoform	50	39.7	79	70-130
74-83-9	Bromomethane	50	53.2	106	70-130
78-93-3	2-Butanone (MEK)	50	40.0	80	70-130
104-51-8	n-Butylbenzene	50	56.0	112	70-130
135-98-8	sec-Butylbenzene	50	56.4	113	70-130
98-06-6	tert-Butylbenzene	50	57.5	115	70-130
75-15-0	Carbon disulfide	50	46.2	92	70-130
56-23-5	Carbon tetrachloride	50	46.2	92	70-130
108-90-7	Chlorobenzene	50	41.0	82	70-130
75-00-3	Chloroethane	50	56.9	114	70-130
110-75-8	2-Chloroethyl vinyl ether	50	50.6	101	70-130
67-66-3	Chloroform	50	56.8	114	70-130
74-87-3	Chloromethane	50	52.1	104	70-130
95-49-8	o-Chlorotoluene	50	58.0	116	70-130
106-43-4	p-Chlorotoluene	50	54.4	109	70-130
124-48-1	Dibromochloromethane	50	46.2	92	70-130
95-50-1	1,2-Dichlorobenzene	50	48.2	96	70-130
541-73-1	1,3-Dichlorobenzene	50	50.1	100	70-130
106-46-7	1,4-Dichlorobenzene	50	46.6	93	70-130
75-71-8	Dichlorodifluoromethane	50	34.0	68* a	70-130
75-34-3	1,1-Dichloroethane	50	56.2	112	70-130
107-06-2	1,2-Dichloroethane	50	54.3	109	70-130
75-35-4	1,1-Dichloroethene	50	51.1	102	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.2	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.8	100	70-130
78-87-5	1,2-Dichloropropane	50	47.5	95	70-130
142-28-9	1,3-Dichloropropane	50	41.5	83	70-130
594-20-7	2,2-Dichloropropane	50	48.7	97	70-130
563-58-6	1,1-Dichloropropene	50	49.5	99	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-BS	L87785.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	46.1	92	70-130
10061-02-6	trans-1,3-Dichloropropene	50	45.0	90	70-130
123-91-1	1,4-Dioxane	125	115	92	70-130
97-63-2	Ethyl methacrylate	50	41.1	82	77-137
100-41-4	Ethylbenzene	50	42.1	84	70-130
87-68-3	Hexachlorobutadiene	50	44.6	89	70-130
591-78-6	2-Hexanone	50	30.2	60* a	70-130
98-82-8	Isopropylbenzene	50	57.2	114	70-130
99-87-6	p-Isopropyltoluene	50	52.2	104	70-130
1634-04-4	Methyl Tert Butyl Ether	50	46.5	93	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	37.7	75	70-130
74-95-3	Methylene bromide	50	44.9	90	70-130
75-09-2	Methylene chloride	50	48.9	98	70-130
91-20-3	Naphthalene	50	56.9	114	70-130
103-65-1	n-Propylbenzene	50	57.9	116	70-130
100-42-5	Styrene	50	44.1	88	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	45.5	91	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	47.1	94	70-130
127-18-4	Tetrachloroethene	50	41.8	84	70-130
108-88-3	Toluene	50	46.0	92	70-130
87-61-6	1,2,3-Trichlorobenzene	50	48.0	96	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.6	93	70-130
71-55-6	1,1,1-Trichloroethane	50	56.7	113	70-130
79-00-5	1,1,2-Trichloroethane	50	46.0	92	70-130
79-01-6	Trichloroethene	50	45.9	92	70-130
75-69-4	Trichlorofluoromethane	50	46.3	93	70-130
96-18-4	1,2,3-Trichloropropane	50	51.1	102	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.3	111	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.4	105	70-130
108-05-4	Vinyl Acetate	50	65.1	130	70-130
75-01-4	Vinyl chloride	50	41.0	82	70-130
	m,p-Xylene	100	80.0	80	70-130
95-47-6	o-Xylene	50	42.3	85	70-130
1330-20-7	Xylene (total)	150	122	81	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3914-BS	L87785.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	112%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	124%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.3	63* a	70-130
107-02-8	Acrolein	250	176	70	70-130
107-13-1	Acrylonitrile	50	38.5	77	70-130
71-43-2	Benzene	50	42.8	86	70-130
108-86-1	Bromobenzene	50	44.3	89	70-130
74-97-5	Bromochloromethane	50	41.8	84	70-130
75-27-4	Bromodichloromethane	50	46.3	93	70-130
75-25-2	Bromoform	50	38.5	77	70-130
74-83-9	Bromomethane	50	45.7	91	70-130
78-93-3	2-Butanone (MEK)	50	40.5	81	70-130
104-51-8	n-Butylbenzene	50	52.0	104	70-130
135-98-8	sec-Butylbenzene	50	48.7	97	70-130
98-06-6	tert-Butylbenzene	50	50.9	102	70-130
75-15-0	Carbon disulfide	50	39.8	80	70-130
56-23-5	Carbon tetrachloride	50	42.3	85	70-130
108-90-7	Chlorobenzene	50	39.3	79	70-130
75-00-3	Chloroethane	50	49.8	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.0	72	70-130
67-66-3	Chloroform	50	49.4	99	70-130
74-87-3	Chloromethane	50	50.8	102	70-130
95-49-8	o-Chlorotoluene	50	49.6	99	70-130
106-43-4	p-Chlorotoluene	50	48.0	96	70-130
124-48-1	Dibromochloromethane	50	45.2	90	70-130
95-50-1	1,2-Dichlorobenzene	50	43.1	86	70-130
541-73-1	1,3-Dichlorobenzene	50	42.8	86	70-130
106-46-7	1,4-Dichlorobenzene	50	41.2	82	70-130
75-71-8	Dichlorodifluoromethane	50	32.2	64* a	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	45.2	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	70-130
156-60-5	trans-1,2-Dichloroethene	50	42.9	86	70-130
78-87-5	1,2-Dichloropropane	50	42.0	84	70-130
142-28-9	1,3-Dichloropropane	50	39.2	78	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	45.8	92	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.2	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	43.6	87	70-130
123-91-1	1,4-Dioxane	125	238	190* b	70-130
97-63-2	Ethyl methacrylate	50	40.1	80	77-137
100-41-4	Ethylbenzene	50	39.8	80	70-130
87-68-3	Hexachlorobutadiene	50	41.3	83	70-130
591-78-6	2-Hexanone	50	31.7	63* a	70-130
98-82-8	Isopropylbenzene	50	49.2	98	70-130
99-87-6	p-Isopropyltoluene	50	46.0	92	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.2	88	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	36.4	73	70-130
74-95-3	Methylene bromide	50	39.6	79	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	51.8	104	70-130
103-65-1	n-Propylbenzene	50	50.3	101	70-130
100-42-5	Styrene	50	42.4	85	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	41.7	83	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	43.6	87	70-130
127-18-4	Tetrachloroethene	50	40.4	81	70-130
108-88-3	Toluene	50	43.2	86	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.0	84	70-130
120-82-1	1,2,4-Trichlorobenzene	50	43.8	88	70-130
71-55-6	1,1,1-Trichloroethane	50	50.2	100	70-130
79-00-5	1,1,2-Trichloroethane	50	41.1	82	70-130
79-01-6	Trichloroethene	50	40.8	82	70-130
75-69-4	Trichlorofluoromethane	50	43.8	88	70-130
96-18-4	1,2,3-Trichloropropane	50	47.8	96	70-130
95-63-6	1,2,4-Trimethylbenzene	50	48.3	97	70-130
108-67-8	1,3,5-Trimethylbenzene	50	45.6	91	70-130
108-05-4	Vinyl Acetate	50	88.8	178* b	70-130
75-01-4	Vinyl chloride	50	37.8	76	70-130
	m,p-Xylene	100	78.0	78	70-130
95-47-6	o-Xylene	50	41.0	82	70-130
1330-20-7	Xylene (total)	150	119	79	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34462-6MS	L87796.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6MSD	L87797.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6	L87792.D	1	10/22/14	GK	n/a	n/a	MSL3914

6.3.1

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

MC34289-2

CAS No.	Compound	MC34462-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	104	42* [a]	250	76.8	31* [a]	30	70-130/30
107-02-8	Acrolein	ND		1250	1280	102	1250	1050	84	20	70-130/30
107-13-1	Acrylonitrile	ND		250	238	95	250	219	88	8	70-130/30
71-43-2	Benzene	0.38		250	278	111	250	261	104	6	70-130/30
108-86-1	Bromobenzene	ND		250	301	120	250	263	105	13	70-130/30
74-97-5	Bromochloromethane	ND		250	279	112	250	254	102	9	70-130/30
75-27-4	Bromodichloromethane	ND		250	303	121	250	274	110	10	70-130/30
75-25-2	Bromoform	ND		250	244	98	250	211	84	15	70-130/30
74-83-9	Bromomethane	ND		250	300	120	250	282	113	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	204	82	250	158	63* [a]	25	70-130/30
104-51-8	n-Butylbenzene	ND		250	338	135* [a]	250	313	125	8	70-130/30
135-98-8	sec-Butylbenzene	ND		250	330	132* [a]	250	296	118	11	70-130/30
98-06-6	tert-Butylbenzene	ND		250	339	136* [a]	250	308	123	10	70-130/30
75-15-0	Carbon disulfide	ND		250	264	106	250	252	101	5	70-130/30
56-23-5	Carbon tetrachloride	ND		250	286	114	250	263	105	8	70-130/30
108-90-7	Chlorobenzene	ND		250	240	96	250	222	89	8	70-130/30
75-00-3	Chloroethane	ND		250	326	130	250	281	112	15	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	355	142* [a]	250	217	87	48* [b]	70-130/30
67-66-3	Chloroform	ND		250	318	127	250	290	116	9	70-130/30
74-87-3	Chloromethane	ND		250	303	121	250	285	114	6	70-130/30
95-49-8	o-Chlorotoluene	ND		250	326	130	250	298	119	9	70-130/30
106-43-4	p-Chlorotoluene	ND		250	322	129	250	290	116	10	70-130/30
124-48-1	Dibromochloromethane	ND		250	261	104	250	239	96	9	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	271	108	250	253	101	7	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	286	114	250	253	101	12	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	273	109	250	249	100	9	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	212	85	250	184	74	14	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	312	125	250	289	116	8	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	320	128	250	297	119	7	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	298	119	250	274	110	8	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	297	119	250	270	108	10	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	285	114	250	264	106	8	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	266	106	250	246	98	8	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	242	97	250	216	86	11	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	372	149* [a]	250	333	133* [a]	11	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	301	120	250	281	112	7	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34462-6MS	L87796.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6MSD	L87797.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6	L87792.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Compound	MC34462-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	278	111	250	260	104	7	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	277	111	250	255	102	8	70-130/30
123-91-1	1,4-Dioxane	ND		625	540	86	625	531	85	2	70-130/30
97-63-2	Ethyl methacrylate	ND		250	250	100	250	232	93	7	72-139/30
100-41-4	Ethylbenzene	ND		250	246	98	250	226	90	8	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	264	106	250	251	100	5	70-130/30
591-78-6	2-Hexanone	ND		250	130	52* [a]	250	126	50* [a]	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	322	129	250	298	119	8	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	303	121	250	280	112	8	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	274	110	250	236	94	15	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	224	90	250	203	81	10	70-130/30
74-95-3	Methylene bromide	ND		250	269	108	250	239	96	12	70-130/30
75-09-2	Methylene chloride	ND		250	267	107	250	243	97	9	70-130/30
91-20-3	Naphthalene	ND		250	322	129	250	297	119	8	70-130/30
103-65-1	n-Propylbenzene	ND		250	337	135* [a]	250	306	122	10	70-130/30
100-42-5	Styrene	ND		250	249	100	250	236	94	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	259	104	250	233	93	11	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	278	111	250	263	105	6	70-130/30
127-18-4	Tetrachloroethene	ND		250	257	103	250	231	92	11	70-130/30
108-88-3	Toluene	0.66		250	273	109	250	253	101	8	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	275	110	250	257	103	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	276	110	250	258	103	7	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	331	132* [a]	250	303	121	9	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	257	103	250	239	96	7	70-130/30
79-01-6	Trichloroethene	ND		250	260	104	250	246	98	6	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	299	120	250	249	100	18	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	316	126	250	274	110	14	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	317	127	250	287	115	10	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	304	122	250	271	108	11	70-130/30
108-05-4	Vinyl Acetate	ND		250	575	230* [a]	250	540	216* [a]	6	70-130/30
75-01-4	Vinyl chloride	ND		250	242	97	250	216	86	11	70-130/30
	m,p-Xylene	ND		500	471	94	500	438	88	7	70-130/30
95-47-6	o-Xylene	ND		250	245	98	250	230	92	6	70-130/30
1330-20-7	Xylene (total)	ND		750	715	95	750	668	89	7	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34462-6MS	L87796.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6MSD	L87797.D	5	10/22/14	GK	n/a	n/a	MSL3914
MC34462-6	L87792.D	1	10/22/14	GK	n/a	n/a	MSL3914

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

MC34289-2

CAS No.	Surrogate Recoveries	MS	MSD	MC34462-6	Limits
1868-53-7	Dibromofluoromethane	108%	106%	102%	70-130%
2037-26-5	Toluene-D8	102%	103%	102%	70-130%
460-00-4	4-Bromofluorobenzene	124%	121%	121%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	78.1	31* [b]	250	68.6	27* [b]	13	70-130/30
107-02-8	Acrolein	ND		1250	1500	120	1250	748	60* [b]	67* [c]	70-130/30
107-13-1	Acrylonitrile	ND		250	217	87	250	177	71	20	70-130/30
71-43-2	Benzene	28.0		250	268	96	250	230	81	15	70-130/30
108-86-1	Bromobenzene	ND		250	259	104	250	212	85	20	70-130/30
74-97-5	Bromochloromethane	ND		250	246	98	250	213	85	14	70-130/30
75-27-4	Bromodichloromethane	ND		250	269	108	250	228	91	16	70-130/30
75-25-2	Bromoform	ND		250	211	84	250	179	72	16	70-130/30
74-83-9	Bromomethane	ND		250	326	130	250	210	84	43* [c]	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	200	80	250	137	55* [b]	37* [c]	70-130/30
104-51-8	n-Butylbenzene	ND		250	283	113	250	237	95	18	70-130/30
135-98-8	sec-Butylbenzene	0.83	J	250	279	111	250	231	92	19	70-130/30
98-06-6	tert-Butylbenzene	4.9	J	250	294	116	250	247	97	17	70-130/30
75-15-0	Carbon disulfide	ND		250	222	89	250	185	74	18	70-130/30
56-23-5	Carbon tetrachloride	ND		250	241	96	250	193	77	22	70-130/30
108-90-7	Chlorobenzene	ND		250	207	83	250	175	70	17	70-130/30
75-00-3	Chloroethane	ND		250	350	140* [b]	250	180	72	64* [c]	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	329	132* [b]	250	227	91	37* [c]	70-130/30
67-66-3	Chloroform	ND		250	285	114	250	228	91	22	70-130/30
74-87-3	Chloromethane	ND		250	318	127	250	196	78	47* [c]	70-130/30
95-49-8	o-Chlorotoluene	ND		250	287	115	250	231	92	22	70-130/30
106-43-4	p-Chlorotoluene	ND		250	282	113	250	228	91	21	70-130/30
124-48-1	Dibromochloromethane	ND		250	236	94	250	197	79	18	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	244	98	250	195	78	22	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	245	98	250	201	80	20	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	199	80	18	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	218	87	250	115	46* [b]	62* [c]	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	280	112	250	230	92	20	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	283	113	250	248	99	13	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	253	101	250	200	80	23	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	259	104	250	219	88	17	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	249	100	250	204	82	20	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	245	98	250	208	83	16	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	210	84	250	174	70	19	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	338	135* [b]	250	261	104	26	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	264	106	250	210	84	23	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	255	102	250	212	85	18	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	262	105	250	213	85	21	70-130/30
123-91-1	1,4-Dioxane	ND		625	561	90	625	492	79	13	70-130/30
97-63-2	Ethyl methacrylate	ND		250	241	96	250	195	78	21	72-139/30
100-41-4	Ethylbenzene	ND		250	214	86	250	176	70	19	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	227	91	250	194	78	16	70-130/30
591-78-6	2-Hexanone	ND		250	129	52* [b]	250	105	42* [b]	21	70-130/30
98-82-8	Isopropylbenzene	1.2	J	250	283	113	250	231	92	20	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	263	105	250	221	88	17	70-130/30
1634-04-4	Methyl Tert Butyl Ether	19.0		250	272	101	250	226	83	18	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	216	86	250	170	68* [b]	24	70-130/30
74-95-3	Methylene bromide	ND		250	235	94	250	194	78	19	70-130/30
75-09-2	Methylene chloride	ND		250	239	96	250	201	80	17	70-130/30
91-20-3	Naphthalene	ND		250	284	114	250	256	102	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	250	240	96	19	70-130/30
100-42-5	Styrene	ND		250	223	89	250	191	76	15	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	228	91	250	194	78	16	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	250	210	84	19	70-130/30
127-18-4	Tetrachloroethene	ND		250	210	84	250	172	69* [b]	20	70-130/30
108-88-3	Toluene	1.5		250	250	99	250	204	81	20	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	234	94	250	202	81	15	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	244	98	250	208	83	16	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	284	114	250	223	89	24	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	242	97	250	202	81	18	70-130/30
79-01-6	Trichloroethene	ND		250	225	90	250	191	76	16	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	314	126	250	155	62* [b]	68* [c]	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	250	229	92	20	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.58	J	250	273	109	250	225	90	19	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	264	106	250	215	86	20	70-130/30
108-05-4	Vinyl Acetate	ND		250	599	240* [d]	250	501	200* [d]	18	70-130/30
75-01-4	Vinyl chloride	ND		250	268	107	250	139	56* [b]	63* [c]	70-130/30
	m,p-Xylene	2.7		500	414	82	500	344	68* [b]	18	70-130/30
95-47-6	o-Xylene	1.2		250	216	86	250	184	73	16	70-130/30
1330-20-7	Xylene (total)	3.9		750	630	83	750	528	70	18	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34289-1

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
1868-53-7	Dibromofluoromethane	106%	110%	108%	70-130%
2037-26-5	Toluene-D8	103%	105%	105%	70-130%
460-00-4	4-Bromofluorobenzene	123%	122%	121%	70-130%

(a) Elevated detection limit due to limited sample volume.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.
(d) Outside control limits. Associated samples are non-detect for this compound.

6.3.2

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3914-CC3872	Injection Date:	10/22/14
Lab File ID:	L87784.D	Injection Time:	10:03
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	184145	8.11	251662	8.92	136644	12.12	131177	14.66	27071	5.85
Upper Limit [a]	368290	8.61	503324	9.42	273288	12.62	262354	15.16	54142	6.35
Lower Limit [b]	92073	7.61	125831	8.42	68322	11.62	65589	14.16	13536	5.35
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3914-BS	186064	8.11	263288	8.93	141461	12.12	129622	14.66	26834	5.85
MSL3914-MB	177099	8.12	244637	8.93	117759	12.12	114127	14.66	23087	5.92
ZZZZZZ	177766	8.12	239163	8.93	114407	12.12	109963	14.66	21007	5.93
ZZZZZZ	166386	8.12	225839	8.93	109219	12.12	105316	14.66	21267	5.94
ZZZZZZ	163687	8.12	226621	8.93	111237	12.12	105475	14.66	19636	5.94
MC34462-6	161941	8.12	214838	8.93	106319	12.12	101387	14.66	22040	5.91
ZZZZZZ	190312	8.12	257763	8.93	125849	12.12	124115	14.66	23633	5.92
MC34462-6MS	157925	8.11	216351	8.92	117797	12.11	109841	14.66	24261	5.86
MC34462-6MSD	177513	8.11	235556	8.92	129424	12.11	123822	14.66	24610	5.85
ZZZZZZ	156133	8.11	206240	8.93	105551	12.12	98928	14.66	20349	5.91
ZZZZZZ	152205	8.12	213406	8.93	103617	12.12	99138	14.66	20192	5.95
ZZZZZZ	187598	8.11	253261	8.93	121758	12.12	120475	14.66	23183	5.93
ZZZZZZ	196204	8.11	273111	8.93	134460	12.12	127112	14.66	25405	5.92
MC34289-2	161424	8.11	223931	8.93	104963	12.12	101502	14.66	21786	5.95
ZZZZZZ	158406	8.12	217886	8.93	108282	12.12	105240	14.66	19688	5.95
ZZZZZZ	187748	8.11	263743	8.93	124948	12.12	119839	14.66	22294	5.87

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.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3916-CC3872	Injection Date:	10/23/14
Lab File ID:	L87837.D	Injection Time:	13:18
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
Upper Limit [a]	424544	8.61	585192	9.43	303612	12.62	311574	15.16	59714	6.35
Lower Limit [b]	106136	7.61	146298	8.43	75903	11.62	77894	14.16	14929	5.35
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3916-BS	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
MSL3916-MB	190403	8.12	261904	8.93	128970	12.12	124846	14.66	22434	5.93
ZZZZZZ	182018	8.12	251932	8.93	124685	12.12	122961	14.66	24885	5.96
ZZZZZZ	208336	8.12	287887	8.93	138839	12.12	140551	14.66	31153	5.92
MC34231-7	200803	8.12	276986	8.93	141791	12.12	141148	14.66	33957	5.90
MC34231-7MS [c]	216131	8.11	292513	8.93	165287	12.11	155038	14.66	35230	5.86
MC34231-7MSD [c]	188322	8.12	254054	8.93	140069	12.12	133976	14.66	26554	5.86
ZZZZZZ	199173	8.12	283066	8.93	134920	12.12	133206	14.66	27509	5.92
ZZZZZZ	166637	8.12	236442	8.93	115318	12.12	110562	14.66	22910	5.93
ZZZZZZ	202444	8.12	282320	8.93	138421	12.12	134921	14.66	28563	5.95
ZZZZZZ	182268	8.12	260167	8.93	145036	12.12	129631	14.66	61731 [d]	5.88
MC34289-1	232116	8.12	336132	8.93	185445	12.12	168626	14.66	61229 [d]	5.90
ZZZZZZ	264232	8.11	374426	8.93	196834	12.12	183677	14.66	47890	5.91
ZZZZZZ	223455	8.12	311175	8.93	163831	12.12	158667	14.66	37675	5.90
ZZZZZZ	259470	8.12	355756	8.93	186647	12.12	170686	14.66	38344	5.93
ZZZZZZ	250215	8.12	347171	8.93	177440	12.12	166979	14.66	34567	5.91
ZZZZZZ	244818	8.12	337139	8.93	165096	12.12	161151	14.66	31202	5.91

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) Elevated detection limit due to limited sample volume.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34289-1	L87853.D	116	104	127
MC34289-2	L87803.D	101	97	123
MC34231-7MS	L87844.D	106	103	123
MC34231-7MSD	L87845.D	110	105	122
MC34462-6MS	L87796.D	108	102	124
MC34462-6MSD	L87797.D	106	103	121
MSL3914-BS	L87785.D	112	100	124
MSL3914-MB	L87788.D	102	101	124
MSL3916-BS	L87837.D	106	103	122
MSL3916-MB	L87840.D	102	100	117

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-MB	R40376.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

7.1.1

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic Acid	ND	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
95-48-7	2-Methylphenol	ND	10	ug/l	
	3&4-Methylphenol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	20	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
62-53-3	Aniline	ND	10	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	2.0	ug/l	
84-74-2	Di-n-butyl phthalate	0.24	5.0	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-MB	R40376.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

CAS No.	Compound	Result	RL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	ug/l	
99-09-2	3-Nitroaniline	ND	10	ug/l	
100-01-6	4-Nitroaniline	ND	10	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
110-86-1	Pyridine	ND	10	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	87%	15-110%
4165-60-0	Nitrobenzene-d5	74%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40209-MB	I92289.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34289-1

7.1.2

7

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	83%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	82%	30-130%

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-BS	R40377.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	20.8	42	30-130
95-57-8	2-Chlorophenol	50	41.2	82	30-130
59-50-7	4-Chloro-3-methyl phenol	50	42.2	84	30-130
120-83-2	2,4-Dichlorophenol	50	45.3	91	30-130
105-67-9	2,4-Dimethylphenol	50	40.0	80	30-130
51-28-5	2,4-Dinitrophenol	50	46.2	92	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.4	95	30-130
95-48-7	2-Methylphenol	50	35.5	71	30-130
	3&4-Methylphenol	100	67.6	68	30-130
88-75-5	2-Nitrophenol	50	45.9	92	30-130
100-02-7	4-Nitrophenol	50	21.6	43	30-130
87-86-5	Pentachlorophenol	50	42.9	86	30-130
108-95-2	Phenol	50	19.0	38	30-130
95-95-4	2,4,5-Trichlorophenol	50	46.8	94	30-130
88-06-2	2,4,6-Trichlorophenol	50	47.7	95	30-130
62-53-3	Aniline	50	24.7	49	40-140
101-55-3	4-Bromophenyl phenyl ether	50	53.3	107	40-140
85-68-7	Butyl benzyl phthalate	50	50.8	102	40-140
100-51-6	Benzyl Alcohol	50	40.1	80	40-140
91-58-7	2-Chloronaphthalene	50	51.2	102	40-140
106-47-8	4-Chloroaniline	50	41.7	83	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	45.1	90	40-140
111-44-4	bis(2-Chloroethyl)ether	50	32.4	65	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	60.5	121	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	50.3	101	40-140
122-66-7	1,2-Diphenylhydrazine	50	49.5	99	40-140
121-14-2	2,4-Dinitrotoluene	50	53.4	107	40-140
606-20-2	2,6-Dinitrotoluene	50	50.6	101	40-140
91-94-1	3,3'-Dichlorobenzidine	50	51.7	103	40-140
132-64-9	Dibenzofuran	50	46.7	93	40-140
84-74-2	Di-n-butyl phthalate	50	47.7	95	40-140
117-84-0	Di-n-octyl phthalate	50	50.8	102	40-140
84-66-2	Diethyl phthalate	50	49.9	100	40-140
131-11-3	Dimethyl phthalate	50	49.5	99	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	51.8	104	40-140
118-74-1	Hexachlorobenzene	50	54.1	108	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-BS	R40377.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	13.5	27* a	40-140
67-72-1	Hexachloroethane	50	40.9	82	40-140
78-59-1	Isophorone	50	40.8	82	40-140
88-74-4	2-Nitroaniline	50	48.5	97	40-140
99-09-2	3-Nitroaniline	50	42.6	85	40-140
100-01-6	4-Nitroaniline	50	44.6	89	40-140
98-95-3	Nitrobenzene	50	43.8	88	40-140
62-75-9	n-Nitrosodimethylamine	50	29.5	59	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	47.0	94	40-140
86-30-6	N-Nitrosodiphenylamine	50	46.0	92	40-140
110-86-1	Pyridine	50	10.5	21* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	51%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	96%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	94%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40209-BS	I92290.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34289-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	45.0	90	40-140
208-96-8	Acenaphthylene	50	40.0	80	40-140
120-12-7	Anthracene	50	45.2	90	40-140
56-55-3	Benzo(a)anthracene	50	51.4	103	40-140
50-32-8	Benzo(a)pyrene	50	49.4	99	40-140
205-99-2	Benzo(b)fluoranthene	50	53.8	108	40-140
191-24-2	Benzo(g,h,i)perylene	50	50.2	100	40-140
207-08-9	Benzo(k)fluoranthene	50	45.0	90	40-140
218-01-9	Chrysene	50	47.3	95	40-140
53-70-3	Dibenzo(a,h)anthracene	50	50.3	101	40-140
206-44-0	Fluoranthene	50	46.0	92	40-140
86-73-7	Fluorene	50	49.3	99	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	49.6	99	40-140
90-12-0	1-Methylnaphthalene	50	43.7	87	40-140
91-57-6	2-Methylnaphthalene	50	43.9	88	40-140
85-01-8	Phenanthrene	50	46.9	94	40-140
129-00-0	Pyrene	50	44.5	89	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	75%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

* = Outside of Control Limits.

7.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-MS	R40378.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486
OP40208-MSD	R40379.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486
MC34000-7	R40380.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

7.3.1

7

CAS No.	Compound	MC34000-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	21.2	42	50	22.0	44	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	41.2	82	50	42.4	85	3	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	42.6	85	50	45.0	90	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	45.6	91	50	47.4	95	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	39.2	78	50	39.5	79	1	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	47.2	94	50	47.9	96	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.3	95	50	48.0	96	1	30-130/20
95-48-7	2-Methylphenol	ND		50	35.4	71	50	36.7	73	4	30-130/20
	3&4-Methylphenol	ND		100	67.6	68	100	71.2	71	5	30-130/20
88-75-5	2-Nitrophenol	ND		50	46.3	93	50	47.3	95	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	22.5	45	50	23.6	47	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	42.5	85	50	44.4	89	4	30-130/20
108-95-2	Phenol	ND		50	19.1	38	50	19.8	40	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	47.5	95	50	48.6	97	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	47.8	96	50	49.0	98	2	30-130/20
62-53-3	Aniline	ND		50	27.5	55	50	29.9	60	8	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	52.4	105	50	53.8	108	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	50.5	101	50	52.3	105	4	40-140/20
100-51-6	Benzyl Alcohol	ND		50	39.8	80	50	41.8	84	5	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	51.3	103	50	52.9	106	3	40-140/20
106-47-8	4-Chloroaniline	ND		50	42.1	84	50	44.5	89	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	45.0	90	50	47.6	95	6	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	32.6	65	50	33.8	68	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	60.5	121	50	66.3	133	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	49.6	99	50	51.6	103	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	45.6	91	50	48.0	96	5	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	52.9	106	50	54.5	109	3	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	50.0	100	50	52.2	104	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	54.6	109	50	55.6	111	2	40-140/20
132-64-9	Dibenzofuran	ND		50	46.8	94	50	48.3	97	3	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	47.2	94	50	49.2	98	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	51.4	103	50	53.8	108	5	40-140/20
84-66-2	Diethyl phthalate	ND		50	49.5	99	50	51.2	102	3	40-140/20
131-11-3	Dimethyl phthalate	ND		50	49.2	98	50	51.1	102	4	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	51.6	103	50	52.8	106	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	53.8	108	50	55.5	111	3	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40208-MS	R40378.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486
OP40208-MSD	R40379.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486
MC34000-7	R40380.D	1	10/17/14	WK	10/15/14	OP40208	MSR1486

The QC reported here applies to the following samples: Method: SW846 8270D

MC34289-1

CAS No.	Compound	MC34000-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	12.9	26* [a]	50	12.1	24* [a]	6	40-140/20
67-72-1	Hexachloroethane	ND		50	41.3	83	50	44.0	88	6	40-140/20
78-59-1	Isophorone	ND		50	41.0	82	50	43.7	87	6	40-140/20
88-74-4	2-Nitroaniline	ND		50	47.9	96	50	49.7	99	4	40-140/20
99-09-2	3-Nitroaniline	ND		50	42.2	84	50	44.2	88	5	40-140/20
100-01-6	4-Nitroaniline	ND		50	43.8	88	50	46.0	92	5	40-140/20
98-95-3	Nitrobenzene	ND		50	43.8	88	50	46.4	93	6	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	29.2	58	50	30.7	61	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	46.8	94	50	50.7	101	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	46.1	92	50	47.2	94	2	40-140/20
110-86-1	Pyridine	ND		50	12.9	26* [a]	50	16.8	34* [a]	26* [b]	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-7	Limits
367-12-4	2-Fluorophenol	51%	52%	46%	15-110%
4165-62-2	Phenol-d5	33%	34%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	94%	77%	15-110%
4165-60-0	Nitrobenzene-d5	80%	83%	74%	30-130%
321-60-8	2-Fluorobiphenyl	82%	86%	74%	30-130%
1718-51-0	Terphenyl-d14	94%	94%	94%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

7.3.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40209-MS	I92291.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439
OP40209-MSD	I92292.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439
MC34000-19	I92293.D	1	10/17/14	WK	10/15/14	OP40209	MSI3439

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34289-1

7.3.2

CAS No.	Compound	MC34000-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	44.5	89	50	46.1	92	4	40-140/20
208-96-8	Acenaphthylene	ND		50	40.2	80	50	41.4	83	3	40-140/20
120-12-7	Anthracene	ND		50	44.8	90	50	46.2	92	3	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	51.2	102	50	52.7	105	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	48.6	97	50	50.3	101	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	53.2	106	50	50.4	101	5	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	49.8	100	50	51.0	102	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	44.8	90	50	44.4	89	1	40-140/20
218-01-9	Chrysene	ND		50	47.0	94	50	48.6	97	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	50.0	100	50	51.8	104	4	40-140/20
206-44-0	Fluoranthene	ND		50	45.5	91	50	47.3	95	4	40-140/20
86-73-7	Fluorene	ND		50	49.3	99	50	50.7	101	3	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	49.3	99	50	50.9	102	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	43.6	87	50	45.5	91	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	44.1	88	50	46.3	93	5	40-140/20
85-01-8	Phenanthrene	ND		50	46.3	93	50	47.8	96	3	40-140/20
129-00-0	Pyrene	ND		50	44.4	89	50	45.7	91	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-19	Limits
4165-60-0	Nitrobenzene-d5	85%	88%	77%	30-130%
321-60-8	2-Fluorobiphenyl	78%	82%	72%	30-130%
1718-51-0	Terphenyl-d14	85%	87%	85%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3439-CC3427	Injection Date:	10/17/14
Lab File ID:	I92288.D	Injection Time:	08:06
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	313460	3.01	715103	4.03	422887	5.52	751181	6.78	631082	9.49	1193366	10.86
Upper Limit [a]	626920	3.51	1430206	4.53	845774	6.02	1502362	7.28	1262164	9.99	2386732	11.36
Lower Limit [b]	156730	2.51	357552	3.53	211444	5.02	375591	6.28	315541	8.99	596683	10.36
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40209-MB	371811	3.01	852162	4.03	504913	5.52	886963	6.78	781541	9.49	1499262	10.86
OP40209-BS	372723	3.01	877479	4.03	507487	5.52	895065	6.78	749996	9.49	1420407	10.87
OP40209-MS	362660	3.01	854261	4.03	498092	5.53	885375	6.78	741390	9.49	1399462	10.88
OP40209-MSD	346506	3.01	814526	4.03	477685	5.53	841975	6.78	702096	9.49	1330362	10.87
MC34000-19	364313	3.01	852339	4.03	501806	5.52	884370	6.78	748865	9.49	1433657	10.86
MC34289-1	352616	3.01	816470	4.03	484068	5.52	844950	6.78	712961	9.49	1381100	10.87
ZZZZZZ	378631	3.00	856361	4.03	504048	5.52	885791	6.78	751918	9.49	1448239	10.86
ZZZZZZ	363398	3.00	845487	4.03	497033	5.52	877755	6.78	737160	9.49	1400179	10.86
ZZZZZZ	397152	3.00	905377	4.03	534775	5.52	935227	6.78	786439	9.49	1506161	10.87
ZZZZZZ	388293	3.00	892710	4.03	521195	5.52	920888	6.78	779686	9.49	1479510	10.87

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1486-CC1481	Injection Date:	10/17/14
Lab File ID:	R40365.D	Injection Time:	07:58
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	237368	4.11	850363	5.21	515530	6.72	897025	8.00	907996	10.29	882840	11.72
Upper Limit [a]	474736	4.61	1700726	5.71	1031060	7.22	1794050	8.50	1815992	10.79	1765680	12.22
Lower Limit [b]	118684	3.61	425182	4.71	257765	6.22	448513	7.50	453998	9.79	441420	11.22
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40220-MB	612070[c]	4.11	2209293[c]	5.21	1347350[c]	6.72	2340586[c]	7.99	2519347[c]	10.29	2423169[c]	11.72
OP40220-BS	322238	4.11	1164153	5.21	700676	6.72	1230332	7.99	1226044	10.29	1177292	11.72
OP40220-MS	306950	4.11	1120057	5.21	687415	6.72	1201210	7.99	1169062	10.29	1166321	11.71
OP40220-MSD	356226	4.11	1289466	5.21	777974	6.72	1334919	7.99	1267339	10.29	1204480	11.71
MC34323-2A	347621	4.11	1257074	5.21	769986	6.72	1339939	7.98	1319171	10.28	1229811	11.71
ZZZZZZ	316656	4.10	1133291	5.21	679951	6.72	1152273	7.99	1066727	10.28	1029109	11.72
ZZZZZZ	345685	4.11	1237842	5.21	750921	6.72	1262375	7.99	1153233	10.28	1069262	11.71
ZZZZZZ	361215	4.11	1303024	5.21	794130	6.72	1345738	7.99	1258299	10.28	1107326	11.71
ZZZZZZ	359055	4.11	1288382	5.21	776332	6.72	1329822	7.99	1246621	10.28	1119348	11.71
OP40208-MB	378328	4.10	1353404	5.21	834216	6.72	1423182	7.99	1383348	10.28	1266499	11.71
OP40208-BS	377936	4.11	1377062	5.21	836516	6.72	1432310	7.99	1405865	10.29	1300250	11.71
OP40208-MS	388070	4.11	1396691	5.21	844750	6.72	1437705	7.99	1399854	10.28	1279013	11.71
OP40208-MSD	372042	4.11	1361121	5.21	834384	6.72	1436760	7.99	1411762	10.28	1264489	11.71
MC34000-7	415489	4.10	1500937	5.21	920649	6.72	1565499	7.98	1465263	10.28	1328770	11.70
MC34289-1	401498	4.10	1463695	5.21	877903	6.72	1503942	7.98	1374795	10.28	1268329	11.70
ZZZZZZ	367902	4.10	1314194	5.20	804605	6.71	1329201	7.98	1226086	10.27	1140896	11.70
ZZZZZZ	347898	4.10	1274701	5.21	795833	6.72	1298343	7.99	1243385	10.28	1171386	11.70
ZZZZZZ	347348	4.10	1272351	5.21	780025	6.72	1337928	7.99	1277962	10.28	1203133	11.70
ZZZZZZ	343479	4.10	1263052	5.21	772782	6.71	1328582	7.98	1244573	10.27	1183200	11.70
ZZZZZZ	355724	4.10	1292682	5.21	796338	6.72	1305012	7.99	1284997	10.28	1263044	11.70

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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) Internal standard spiked at 2x concentration.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34289-1	R40381.D	46	31	89	76	78	91
OP40208-BS	R40377.D	51	33	96	79	79	94
OP40208-MB	R40376.D	48	31	87	74	73	92
OP40208-MS	R40378.D	51	33	94	80	82	94
OP40208-MSD	R40379.D	52	34	94	83	86	94

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34289-1	I92294.D	79	73	80
OP40209-BS	I92290.D	85	75	85
OP40209-MB	I92289.D	83	71	82
OP40209-MS	I92291.D	85	78	85
OP40209-MSD	I92292.D	88	82	87

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MB	BB59914.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34289-1, MC34289-3

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	100%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-BS	BB59915.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34289-1, MC34289-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.078	110	60-140
106-93-4	1,2-Dibromoethane	0.071	0.068	96	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	90%	36-173%
460-00-4	Bromofluorobenzene (S)	93%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MS	BB59916.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
OP40218-MSD	BB59917.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
MC34000-20	BB59918.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples:. Method: SW846 8011

MC34289-1, MC34289-3

CAS No.	Compound	MC34000-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.081	114	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.074	104	0.071	0.072	101	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-20	Limits
460-00-4	Bromofluorobenzene (S)	75%	70%	68%	36-173%
460-00-4	Bromofluorobenzene (S)	75%	71%	68%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34289-1	BB59923.D	68	95
MC34289-3	BB59925.D	68	74
OP40218-BS	BB59915.D	90	93
OP40218-MB	BB59914.D	100	101
OP40218-MS	BB59916.D	75	75
OP40218-MSD	BB59917.D	70	71

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3334-ICC3334	Injection Date:	10/16/14
Lab File ID:	BB59910.D	Injection Time:	09:22
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40218-MB	BB59914.D	10/16/14	10:43	3.45	3.47
OP40218-BS	BB59915.D	10/16/14	11:01	3.45	3.46
OP40218-MS	BB59916.D	10/16/14	11:19	3.45	3.46
OP40218-MSD	BB59917.D	10/16/14	11:37	3.45	3.46
MC34000-20	BB59918.D	10/16/14	11:55	3.45	3.46
ZZZZZZ	BB59919.D	10/16/14	12:13	3.45	3.46
ZZZZZZ	BB59920.D	10/16/14	12:30	3.45	3.46
ZZZZZZ	BB59921.D	10/16/14	12:48	3.45	3.46
ZZZZZZ	BB59922.D	10/16/14	13:06	3.45	3.46
MC34289-1	BB59923.D	10/16/14	13:24	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34289
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3334-CC3334	Injection Date:	10/16/14
Lab File ID:	BB59924.D	Injection Time:	13:42
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34289-3	BB59925.D	10/16/14	14:00	3.45	3.46
ZZZZZZ	BB59926.D	10/16/14	14:18	3.45	3.46
ZZZZZZ	BB59927.D	10/16/14	14:36	3.45	3.46
ZZZZZZ	BB59928.D	10/16/14	14:54	3.45	3.46
ZZZZZZ	BB59929.D	10/16/14	15:12	3.45	3.46
ZZZZZZ	BB59930.D	10/16/14	15:30	3.45	3.46
ZZZZZZ	BB59931.D	10/16/14	15:48	3.45	3.46
ZZZZZZ	BB59932.D	10/16/14	16:06	3.45	3.46
ZZZZZZ	BB59933.D	10/16/14	16:24	3.45	3.46
GBB3334-ECC333	BB59934.D	10/16/14	16:42	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34338

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/13/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW14-ROX-101414	P66-ROX-101414
P74-ROX-101414	P59-ROX-101414-EB
P59-ROX-101414	P57-ROX-101414
P57-ROX-101414-Dup	TB-ROX-101414-HCL
TB-ROX-101414-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated phenanthrene was detected in the method blank, and although not indicated in the laboratory case narrative, di-n-butyl phthalate was detected in the equipment blank. VOC LCS recoveries were outside evaluation criteria. The VOC surrogate 4-bromofluorobenzene was outside evaluation criteria for sample P59-ROX-101414 Run#1, and the SVOC surrogate 2,4,6-tribromophenol was outside evaluation criteria for field duplicate pair P57-ROX-101414/P57-ROX-101414-Dup Run#2. VOC MS/MSD recoveries and VOC MS/MSD RPDs were outside evaluation criteria in sample P74-ROX-101414. Tert butyl alcohol-d_9 internal standard area recovery was outside criteria in sample P57-ROX-101414. The difference in total xylene results for the field duplicate pair P57-ROX-101414/P57-ROX-101414-Dup was greater than two times (2X) the reporting level; therefore, results were qualified as estimated. Sample P59-ROX-101414 and field duplicate pair P57-ROX-101414/P57-ROX-101414-Dup were diluted due to high levels of target analytes. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for vinyl acetate exceeded 30 percent difference (%D). Also, the continuing calibration verification for vinyl acetate and 2-chloroethyl vinyl ether exceeded 40%D.

The cooler receipt form indicated that two of two coolers were received by the laboratory at temperatures of 0.7ºC and 1.2°C, which are outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
P59-ROX-101414-EB	SVOCs	Di-n-butyl phthalate	0.52 µg/L
OP40232-MB	PAHs	Phenanthrene	0.027 µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW14-ROX-101414	SVOCs	Di-n-butyl phthalate	-	**U**
P66-ROX-101414	SVOCs	Di-n-butyl phthalate	-	**U**
P74-ROX-101414	SVOCs	Di-n-butyl phthalate	-	**U**
P59-ROX-101414	SVOCs	Di-n-butyl phthalate	-	**U**
P57-ROX-101414	SVOCs	Di-n-butyl phthalate	-	**U**
P57-ROX-101414-Dup	SVOCs	Di-n-butyl phthalate	-	**U**
MW14-ROX-101414	PAHs	Phenanthrene	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSL3916-BS	VOCs	Acetone	**63**	70-130
MSL3916-BS	VOCs	Dichlorodifluoromethane	**64**	70-130
MSL3916-BS	VOCs	1,4-Dioxane	**190**	70-130
MSL3916-BS	VOCs	2-Hexanone	**63**	70-130
MSL3916-BS	VOCs	Vinyl acetate	**178**	70-130
MSL3917-BS	VOCs	Acetone	**55**	70-130
MSL3917-BS	VOCs	2-Chloroethyl vinyl ether	**143**	70-130
MSL3917-BS	VOCs	2,2-Dichloropropane	**131**	70-130
MSL3917-BS	VOCs	2-Hexanone	**65**	70-130
MSL3917-BS	VOCs	Vinyl acetate	**212**	70-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSN3916-BS was associated with the trip blank and equipment blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P59-ROX-101414	VOCs	Acetone	**UJ**
P59-ROX-101414	VOCs	Dichlorodifluoromethane	**UJ**
P59-ROX-101414	VOCs	2-Hexanone	**UJ**
P57-ROX-101414	VOCs	Acetone	**UJ**
P57-ROX-101414	VOCs	Dichlorodifluoromethane	**UJ**
P57-ROX-101414	VOCs	2-Hexanone	**UJ**
P57-ROX-101414-Dup	VOCs	Acetone	**UJ**
P57-ROX-101414-Dup	VOCs	Dichlorodifluoromethane	**UJ**
P57-ROX-101414-Dup	VOCs	2-Hexanone	**UJ**
MW14-ROX-101414	VOCs	Acetone	**UJ**
MW14-ROX-101414	VOCs	2-Hexanone	**UJ**
P66-ROX-101414	VOCs	Acetone	**UJ**
P66-ROX-101414	VOCs	2-Hexanone	**UJ**
P74-ROX-101414	VOCs	Acetone	**UJ**
P74-ROX-101414	VOCs	2-Hexanone	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P59-ROX-101414 Run#1	VOCs	4-Bromofluorobenzene	**131**	70-130
P57-ROX-101414 Run#2	SVOCs	2,4,6-Tribromophenol	**140**	15-110
P57-ROX-101414-Dup Run#2	SVOCs	2,4,6-Tribromophenol	**135**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P59-ROX-101414	VOCs	n-Butylbenzene	**J**
P59-ROX-101414	VOCs	sec-Butylbenzene	**J**
P59-ROX-101414	VOCs	tert-Btuylbenzene	**J**
P59-ROX-101414	VOCs	Isopropylbenzene	**J**
P59-ROX-101414	VOCs	p-Isopropyltoluene	**J**
P59-ROX-101414	VOCs	Methyl tert butyl ether	**J**
P59-ROX-101414	VOCs	Naphthalene	**J**
P59-ROX-101414	VOCs	n-Propylbenzene	**J**
P59-ROX-101414	VOCs	1,3,5-Trimethylbenzene	**J**
P57-ROX-101414	SVOCs	Phenol	**J**
P57-ROX-101414-Dup	SVOCs	Phenol	**J**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample P74-ROX-101414 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P74-ROX-101414	VOCs	Acetone	**21/30**	**35**	70-130/30
P74-ROX-101414	VOCs	2-Butanone (MEK)	**65/64**	1	70-130/30
P74-ROX-101414	VOCs	Dichlorodifluoromethane	**64/66**	3	70-130/30
P74-ROX-101414	VOCs	1,4-Dioxane	**68**/89	27	70-130/30
P74-ROX-101414	VOCs	2-Hexanone	**44/44**	1	70-130/30
P74-ROX-101414	VOCs	4-Methyl-2-pentanone (MIBK)	**69**/74	7	70-130/30
P74-ROX-101414	VOCs	Vinyl acetate	**194/194**	0	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P59-ROX-101414	VOCs	Tert butyl alcohol-d_9	**61731**	14929-59714

Analytical data reported as non-detect and associated with IS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. There were no target analytes associated with tert butyl alcohol-d_9; therefore, no qualification of data was required based on tert butyl alcohol-d_9.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P57-ROX-101414	P57-ROX-101414-Dup

Were field duplicates within evaluation criteria?

No

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
P57-ROX-101414	P57-ROX-101414-Dup	VOCs	Xylene (total)	**>2X RL**	**J/J**

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

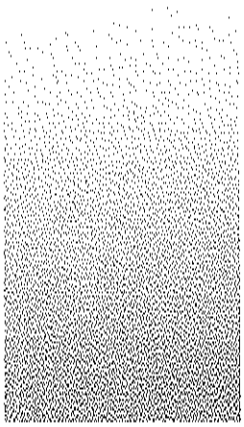
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

10/31/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34338

Sampling Date: 10/14/14

Report to:

URS Corporation

darcy.chase@urs.com

ATTN: Darcy Chase

Total number of pages in report: **118**

Reviewed on 11/13/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34338

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34338-1	10/14/14	10:00	MMLR	10/15/14	AQ	Ground Water	MW14-ROX-101414
MC34338-2	10/14/14	10:50	MMLR	10/15/14	AQ	Ground Water	P66-ROX-101414
MC34338-3	10/14/14	11:45	MMLR	10/15/14	AQ	Ground Water	P74-ROX-101414
MC34338-4	10/14/14	13:25	MMLR	10/15/14	AQ	Equipment Blank	P59-ROX-101414-EB
MC34338-5	10/14/14	15:45	MMLR	10/15/14	AQ	Ground Water	P59-ROX-101414
MC34338-6	10/14/14	16:30	MMLR	10/15/14	AQ	Ground Water	P57-ROX-101414
MC34338-7	10/14/14	16:00	MMLR	10/15/14	AQ	Ground Water	P57-ROX-101414-DUP
MC34338-8	10/14/14	00:00	MMLR	10/15/14	AQ	Trip Blank Water	TB-ROX-101414-HCL
MC34338-9	10/14/14	00:00	MMLR	10/15/14	AQ	Trip Blank Water	TB-ROX-101414-ST

ACCUTEST LABORATORIES

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC34338
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Centra	Report Date	10/29/2014 10:48:32 AM

7 Sample(s) and 2 Trip Blank(s) were collected on 10/14/2014 and were received at Accutest on 10/15/2014 properly preserved, at 0.7 Deg. C and intact. These Samples received an Accutest job number of MC34338. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix: AQ Batch ID: MSL3916

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC34231-7MS, MC34231-7MSD were used as the QC samples indicated.
- Initial calibration verification standard MSL3909-ICV3872 for vinyl acetate exceed 30% difference (response biased high). Associated samples are non-detect for this compound.
- Blank Spike Recovery(s) for 2-Hexanone, Acetone, Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Chloroethane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, m,p-Xylene, Tetrachloroethene, 2-Butanone (MEK), Acrolein, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acrolein, Bromomethane, Chloroethane, Chloromethane, Dichlorodifluoromethane, Trichlorofluoromethane, Vinyl chloride are outside control limits for sample MC34231-7MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC34231-7MS/MSD: Elevated detection limit due to limited sample volume.
- MC34231-7MS/MSD for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- Continuing alibration standard MSL3916-CC3872 for vinyl acetate exceed 40% difference (response biased high). Associated samples are non-detect for this compound.
- MSL3916-BS for 1,4-Dioxane, Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.
- MC34338-5 for 4-Bromofluorobenzene: Outside control limits due to possible matrix interference. Confirmed by reanalysis.

Matrix: AQ Batch ID: MSL3917

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34338-3MS, MC34338-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,4-Dioxane, 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Dichlorodifluoromethane, Vinyl Acetate 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, Dichlorodifluoromethane, Acetone, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Acetone are outside control limits for sample MC34338-3MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ	Batch ID: MSL3917

- Continuing alibration standard MSL3917-CC3872 for vinyl acetate, 2-chloroethyl vinyl ether exceed 40% difference (response biased high). Associated samples are non-detect for this compound.
- MSL3917-BS for Vinyl Acetate: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP40231

- 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.
- Sample(s) MC34000-22MS, MC34000-22MSD were used as the QC samples indicated.
- MC34338-6, 7 for 2,4,6-Tribromophenol: Outside control limits due to dilution.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP40232

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-23MS, MC34000-23MSD were used as the QC samples indicated.
- Sample(s) MC34338-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Calibration standard MSI3446-ICV3427 not associate with this job.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP40218

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34000-20MS, MC34000-20MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

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(MC34338).

Summary of Hits

Job Number: MC34338
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34338-1	MW14-ROX-101414					
tert-Butylbenzene		0.63 J	5.0	0.39	ug/l	SW846 8260C
Isopropylbenzene		0.43 J	5.0	0.35	ug/l	SW846 8260C
Xylene (total)		0.41 J	1.0	0.36	ug/l	SW846 8260C
Di-n-butyl phthalate		~~0.50 J~~ U	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.54	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene		0.24	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		1.4 J	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.021~~ JB U	0.056	0.014	ug/l	SW846 8270D BY SIM
MC34338-2	P66-ROX-101414					
Benzene		21.2	0.50	0.32	ug/l	SW846 8260C
n-Butylbenzene		13.5	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		17.3	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		3.6 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		1.3	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		129	5.0	0.35	ug/l	SW846 8260C
Methyl Tert Butyl Ether		11.1	1.0	0.51	ug/l	SW846 8260C
n-Propylbenzene		137	5.0	0.49	ug/l	SW846 8260C
Toluene		1.6	1.0	0.33	ug/l	SW846 8260C
o-Xylene		0.90 J	1.0	0.36	ug/l	SW846 8260C
Xylene (total)		1.8	1.0	0.36	ug/l	SW846 8260C
Dibenzofuran		1.2 J	2.2	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.66 J~~ U	5.5	0.19	ug/l	SW846 8270D
Acenaphthene		0.45	0.11	0.076	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.18	0.11	0.054	ug/l	SW846 8270D BY SIM
Fluorene		1.1	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		59.5	2.2	0.55	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.5	2.2	0.55	ug/l	SW846 8270D BY SIM
Phenanthrene		0.64	0.055	0.014	ug/l	SW846 8270D BY SIM
Pyrene		0.043 J	0.11	0.042	ug/l	SW846 8270D BY SIM
MC34338-3	P74-ROX-101414					
Benzene		0.68	0.50	0.32	ug/l	SW846 8260C
Xylene (total)		0.43 J	1.0	0.36	ug/l	SW846 8260C
Butyl benzyl phthalate		0.96 J	5.0	0.53	ug/l	SW846 8270D
Di-n-butyl phthalate		~~1.9 J~~ U	5.0	0.17	ug/l	SW846 8270D
MC34338-4	P59-ROX-101414-EB					
Di-n-butyl phthalate		0.52 J	5.6	0.19	ug/l	SW846 8270D

Summary of Hits

Job Number: MC34338
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34338-5	P59-ROX-101414					
Benzene		12000	25	16	ug/l	SW846 8260C
n-Butylbenzene		27.8	5.0	1.1	ug/l	SW846 8260C
sec-Butylbenzene		9.7	5.0	0.42	ug/l	SW846 8260C
tert-Butylbenzene		2.4 J	5.0	0.39	ug/l	SW846 8260C
Ethylbenzene		2330	50	19	ug/l	SW846 8260C
Isopropylbenzene		93.2	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		4.3 J	5.0	0.37	ug/l	SW846 8260C
Methyl Tert Butyl Ether		4.1	1.0	0.51	ug/l	SW846 8260C
Naphthalene		380	5.0	0.69	ug/l	SW846 8260C
n-Propylbenzene		188	5.0	0.49	ug/l	SW846 8260C
Toluene		1130	50	17	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		901	250	16	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		260	5.0	0.38	ug/l	SW846 8260C
m,p-Xylene		5140	50	47	ug/l	SW846 8260C
o-Xylene		1030	50	18	ug/l	SW846 8260C
Xylene (total)		6170	50	18	ug/l	SW846 8260C
2,4-Dimethylphenol		49.2	11	0.61	ug/l	SW846 8270D
2-Methylphenol		38.7	11	0.25	ug/l	SW846 8270D
3&4-Methylphenol		9.2 J	11	0.51	ug/l	SW846 8270D
Phenol		36.1	5.4	0.33	ug/l	SW846 8270D
bis(2-Chloroethyl)ether		3.5 J	5.4	0.38	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.42 J~~	5.4	0.19	ug/l	SW846 8270D
Acenaphthene		0.45 J	0.54	0.37	ug/l	SW846 8270D BY SIM
Fluorene		0.87	0.54	0.54	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		26.8	11	2.7	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		42.5	11	2.7	ug/l	SW846 8270D BY SIM
Phenanthrene		1.5	0.27	0.068	ug/l	SW846 8270D BY SIM
MC34338-6	P57-ROX-101414					
Benzene		255000	1000	630	ug/l	SW846 8260C
Ethylbenzene		3860	2000	760	ug/l	SW846 8260C
Naphthalene		2050 J	10000	1400	ug/l	SW846 8260C
Toluene		2650	2000	660	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		2370 J	10000	640	ug/l	SW846 8260C
m,p-Xylene		5790	2000	1900	ug/l	SW846 8260C
o-Xylene		2100	2000	730	ug/l	SW846 8260C
Xylene (total)		7890	2000	730	ug/l	SW846 8260C
3&4-Methylphenol		15.2	11	0.52	ug/l	SW846 8270D
Phenol		274	28	1.7	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.86 J~~	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.36	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene		0.68	0.11	0.11	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC34338
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1-Methylnaphthalene		26.0	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		34.5	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.59	0.056	0.014	ug/l	SW846 8270D BY SIM
MC34338-7	P57-ROX-101414-DUP					
Benzene		220000	1000	630	ug/l	SW846 8260C
Ethylbenzene		1770 J	2000	760	ug/l	SW846 8260C
Toluene		849 J	2000	660	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1180 J	10000	640	ug/l	SW846 8260C
m,p-Xylene		2370	2000	1900	ug/l	SW846 8260C
o-Xylene		949 J	2000	730	ug/l	SW846 8260C
Xylene (total)		3320 J	2000	730	ug/l	SW846 8260C
3&4-Methylphenol		13.8	12	0.54	ug/l	SW846 8270D
Phenol		271 J	29	1.8	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.82 J~~ U	5.8	0.20	ug/l	SW846 8270D
Acenaphthene		0.30	0.12	0.080	ug/l	SW846 8270D BY SIM
Fluorene		0.65	0.12	0.12	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		24.3	2.3	0.58	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		33.8	2.3	0.58	ug/l	SW846 8270D BY SIM
Phenanthrene		0.58	0.058	0.015	ug/l	SW846 8270D BY SIM
MC34338-8	TB-ROX-101414-HCL					
No hits reported in this sample.						
MC34338-9	TB-ROX-101414-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87874.D	1	10/24/14	GK	n/a	n/a	MSL3917
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	0.63	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	us
98-82-8	Isopropylbenzene	0.43	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	0.41	1.0	0.36	ug/l	J

ND = Not detected MDL = Method Detection Limit
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:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	118%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40400.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.56~~ U	5.6	0.19	ug/l	J U
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	32%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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RL = Reporting Limit
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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:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92416.D	1	10/23/14	WK	10/16/14	OP40232	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.54	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.24	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	1.4	2.2	0.56	ug/l	J
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	~~0.021~~	0.056	0.014	ug/l	JB
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-101414		
Lab Sample ID:	MC34338-1	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59926.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	100%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87876.D	1	10/24/14	GK	n/a	n/a	MSL3917
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	21.2	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	13.5	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	17.3	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	3.6	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	129	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	11.1	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	137	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1.6	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	0.90	1.0	0.36	ug/l	J
1330-20-7	Xylene (total)	1.8	1.0	0.36	ug/l	

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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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	121%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40401.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.91	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.5	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.29	ug/l	
132-64-9	Dibenzofuran	1.2	2.2	0.28	ug/l	J
84-74-2	Di-n-butyl phthalate	~~0.66~~ 4	5.5	0.19	ug/l	J 4
117-84-0	Di-n-octyl phthalate	ND	5.5	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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Report of Analysis

Client Sample ID:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.5	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.33	ug/l	
78-59-1	Isophorone	ND	5.5	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	70%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92417.D	1	10/23/14	WK	10/16/14	OP40232	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	910 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.45	0.11	0.076	ug/l	
208-96-8	Acenaphthylene	0.18	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.055	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.055	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	1.1	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	59.5	2.2	0.55	ug/l	
91-57-6	2-Methylnaphthalene	7.5	2.2	0.55	ug/l	
85-01-8	Phenanthrene	0.64	0.055	0.014	ug/l	
129-00-0	Pyrene	0.043	0.11	0.042	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P66-ROX-101414		
Lab Sample ID:	MC34338-2	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59927.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	75%		36-173%
460-00-4	Bromofluorobenzene (S)	111%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	U
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.68	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	UJ
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	0.43	1.0	0.36	ug/l	J

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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:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	121%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40402.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2							

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

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	0.96	5.0	0.53	ug/l	J
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	~~1.9~~ U	5.0	0.17	ug/l	J U
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92418.D	1	10/23/14	WK	10/16/14	OP40232	MSI3445
Run #2							

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

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P74-ROX-101414		
Lab Sample ID:	MC34338-3	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59928.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	88%		36-173%
460-00-4	Bromofluorobenzene (S)	92%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87848.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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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:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	122%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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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:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40403.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.52	5.6	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92419.D	1	10/23/14	WK	10/16/14	OP40232	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

ND = Not detected MDL = Method Detection Limit
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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:	P59-ROX-101414-EB		
Lab Sample ID:	MC34338-4	Date Sampled:	10/14/14
Matrix:	AQ - Equipment Blank	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59929.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	37.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	90%		36-173%
460-00-4	Bromofluorobenzene (S)	96%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87849.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2	L87877.D	50	10/24/14	GK	n/a	n/a	MSL3917

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	UJ
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	12000 a	25	16	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	27.8	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	9.7	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	2.4	5.0	0.39	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	UJ
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	2330 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	J
98-82-8	Isopropylbenzene	93.2	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	4.3	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	4.1	1.0	0.51	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	380	5.0	0.69	ug/l	J
103-65-1	n-Propylbenzene	188	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	1130 [a]	50	17	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	901 [a]	250	16	ug/l	
108-67-8	1,3,5-Trimethylbenzene	260	5.0	0.38	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	5140 [a]	50	47	ug/l	
95-47-6	o-Xylene	1030 [a]	50	18	ug/l	
1330-20-7	Xylene (total)	6170 [a]	50	18	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	109%	70-130%
2037-26-5	Toluene-D8	104%	101%	70-130%
460-00-4	4-Bromofluorobenzene	131% b	124%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2
(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40404.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	49.2	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	38.7	11	0.25	ug/l	
	3&4-Methylphenol	9.2	11	0.51	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	36.1	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	3.5	5.4	0.38	ug/l	J
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.42~~ ND	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	58%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	96%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92420.D	5	10/23/14	WK	10/16/14	OP40232	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.45	0.54	0.37	ug/l	J
208-96-8	Acenaphthylene	ND	0.54	0.27	ug/l	
120-12-7	Anthracene	ND	0.54	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.27	0.11	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.54	0.16	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.27	0.17	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.54	0.15	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.54	0.21	ug/l	
218-01-9	Chrysene	ND	0.54	0.13	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.54	0.17	ug/l	
206-44-0	Fluoranthene	ND	0.54	0.22	ug/l	
86-73-7	Fluorene	0.87	0.54	0.54	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.54	0.17	ug/l	
90-12-0	1-Methylnaphthalene	26.8	11	2.7	ug/l	
91-57-6	2-Methylnaphthalene	42.5	11	2.7	ug/l	
85-01-8	Phenanthrene	1.5	0.27	0.068	ug/l	
129-00-0	Pyrene	ND	0.54	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P59-ROX-101414		
Lab Sample ID:	MC34338-5	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59930.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	52%		36-173%
460-00-4	Bromofluorobenzene (S)	88%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87857.D	2000	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5000	ug/l	UJ
107-02-8	Acrolein	ND	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND	10000	4200	ug/l	
71-43-2	Benzene	255000	1000	630	ug/l	
108-86-1	Bromobenzene	ND	10000	700	ug/l	
74-97-5	Bromochloromethane	ND	10000	1100	ug/l	
75-27-4	Bromodichloromethane	ND	2000	680	ug/l	
75-25-2	Bromoform	ND	2000	1200	ug/l	
74-83-9	Bromomethane	ND	4000	3500	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	5000	ug/l	
104-51-8	n-Butylbenzene	ND	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	780	ug/l	
75-15-0	Carbon disulfide	ND	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1100	ug/l	
108-90-7	Chlorobenzene	ND	2000	860	ug/l	
75-00-3	Chloroethane	ND	4000	1100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	6600	ug/l	
67-66-3	Chloroform	ND	2000	820	ug/l	
74-87-3	Chloromethane	ND	4000	2100	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND	2000	760	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	630	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	710	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1400	ug/l	UJ
75-34-3	1,1-Dichloroethane	ND	2000	720	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	1000	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1200	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1700	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1000	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL.		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	1000	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	840	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	1000	ug/l	
123-91-1	1,4-Dioxane	ND	50000	22000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1000	ug/l	
100-41-4	Ethylbenzene	3860	2000	760	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	3300	ug/l	
591-78-6	2-Hexanone	ND	10000	3200	ug/l	UJ
98-82-8	Isopropylbenzene	ND	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
74-95-3	Methylene bromide	ND	10000	1000	ug/l	
75-09-2	Methylene chloride	ND	4000	560	ug/l	
91-20-3	Naphthalene	2050	10000	1400	ug/l	J
103-65-1	n-Propylbenzene	ND	10000	980	ug/l	
100-42-5	Styrene	ND	10000	1700	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	800	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	2650	2000	660	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	930	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	910	ug/l	
79-01-6	Trichloroethene	ND	2000	940	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	2370	10000	640	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	10000	770	ug/l	
108-05-4	Vinyl Acetate	ND	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	5790	2000	1900	ug/l	
95-47-6	o-Xylene	2100	2000	730	ug/l	
1330-20-7	Xylene (total)	7890	2000	730	ug/l	J

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	126%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40405.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2	F76979.D	5	10/21/14	WK	10/16/14	OP40231	MSF3371

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2	890 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	15.2	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	274 a	28	1.7	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.86 u	5.6	0.19	ug/l	J u
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%	65%	15-110%
4165-62-2	Phenol-d5	34%	43%	15-110%
118-79-6	2,4,6-Tribromophenol	109%	140% b	15-110%
4165-60-0	Nitrobenzene-d5	77%	98%	30-130%
321-60-8	2-Fluorobiphenyl	44%	82%	30-130%
1718-51-0	Terphenyl-d14	100%	116%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Result is from Run# 2
(b) Outside control limits due to dilution.

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92480.D	1	10/27/14	WK	10/16/14	OP40232	MSI3447
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.36	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	0.68	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	26.0	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	34.5	2.2	0.56	ug/l	
85-01-8	Phenanthrene	0.59	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	85%		30-130%

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-101414		
Lab Sample ID:	MC34338-6	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59931.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	55%		36-173%
460-00-4	Bromofluorobenzene (S)	97%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87858.D	2000	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5000	ug/l	us
107-02-8	Acrolein	ND	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND	10000	4200	ug/l	
71-43-2	Benzene	220000	1000	630	ug/l	
108-86-1	Bromobenzene	ND	10000	700	ug/l	
74-97-5	Bromochloromethane	ND	10000	1100	ug/l	
75-27-4	Bromodichloromethane	ND	2000	680	ug/l	
75-25-2	Bromoform	ND	2000	1200	ug/l	
74-83-9	Bromomethane	ND	4000	3500	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	5000	ug/l	
104-51-8	n-Butylbenzene	ND	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	780	ug/l	
75-15-0	Carbon disulfide	ND	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	1100	ug/l	
108-90-7	Chlorobenzene	ND	2000	860	ug/l	
75-00-3	Chloroethane	ND	4000	1100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	6600	ug/l	
67-66-3	Chloroform	ND	2000	820	ug/l	
74-87-3	Chloromethane	ND	4000	2100	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND	2000	760	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	630	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	1100	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	710	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1400	ug/l	us
75-34-3	1,1-Dichloroethane	ND	2000	720	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	1000	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	1200	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	1700	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	1000	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	1000	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	840	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	1000	ug/l	
123-91-1	1,4-Dioxane	ND	50000	22000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1000	ug/l	
100-41-4	Ethylbenzene	1770	2000	760	ug/l	J
87-68-3	Hexachlorobutadiene	ND	10000	3300	ug/l	
591-78-6	2-Hexanone	ND	10000	3200	ug/l	UJ
98-82-8	Isopropylbenzene	ND	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
74-95-3	Methylene bromide	ND	10000	1000	ug/l	
75-09-2	Methylene chloride	ND	4000	560	ug/l	
91-20-3	Naphthalene	ND	10000	1400	ug/l	
103-65-1	n-Propylbenzene	ND	10000	980	ug/l	
100-42-5	Styrene	ND	10000	1700	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	800	ug/l	
127-18-4	Tetrachloroethene	ND	2000	1200	ug/l	
108-88-3	Toluene	849	2000	660	ug/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	930	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	910	ug/l	
79-01-6	Trichloroethene	ND	2000	940	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1180	10000	640	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	10000	770	ug/l	
108-05-4	Vinyl Acetate	ND	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND	2000	1200	ug/l	
	m,p-Xylene	2370	2000	1900	ug/l	
95-47-6	o-Xylene	949	2000	730	ug/l	J
1330-20-7	Xylene (total)	3320	2000	730	ug/l	J

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	125%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40406.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
Run #2	F76980.D	5	10/21/14	WK	10/16/14	OP40231	MSF3371

	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2	860 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.8	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.96	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.46	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.65	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.2	ug/l	
95-48-7	2-Methylphenol	ND	12	0.26	ug/l	
	3&4-Methylphenol	13.8	12	0.54	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	271 [a]	29	1.8	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	12	0.43	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.20	ug/l	
62-53-3	Aniline	ND	12	0.74	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.8	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.8	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.8	0.36	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.65	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.8	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.8	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.8	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.8	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.8	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.53	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.8	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	~~0.82~~	5.8	0.20	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.8	0.33	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.7

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.8	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.8	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.8	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.8	0.35	ug/l	
78-59-1	Isophorone	ND	5.8	0.52	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.46	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.8	0.45	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.8	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.8	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.8	0.22	ug/l	
110-86-1	Pyridine	ND	12	0.60	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%	59%	15-110%
4165-62-2	Phenol-d5	33%	44%	15-110%
118-79-6	2,4,6-Tribromophenol	102%	135% b	15-110%
4165-60-0	Nitrobenzene-d5	75%	93%	30-130%
321-60-8	2-Fluorobiphenyl	49%	79%	30-130%
1718-51-0	Terphenyl-d14	98%	108%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Result is from Run# 2
(b) Outside control limits due to dilution.

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92481.D	1	10/27/14	WK	10/16/14	OP40232	MSI3447
Run #2							

	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.30	0.12	0.080	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.058	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.058	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.12	0.037	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.047	ug/l	
86-73-7	Fluorene	0.65	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	24.3	2.3	0.58	ug/l	
91-57-6	2-Methylnaphthalene	33.8	2.3	0.58	ug/l	
85-01-8	Phenanthrene	0.58	0.058	0.015	ug/l	
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P57-ROX-101414-DUP		
Lab Sample ID:	MC34338-7	Date Sampled:	10/14/14
Matrix:	AQ - Ground Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59932.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	52%		36-173%
460-00-4	Bromofluorobenzene (S)	96%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101414-HCL		
Lab Sample ID:	MC34338-8	Date Sampled:	10/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L87841.D	1	10/23/14	GK	n/a	n/a	MSL3916
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101414-HCL		
Lab Sample ID:	MC34338-8	Date Sampled:	10/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101414-HCL		
Lab Sample ID:	MC34338-8	Date Sampled:	10/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	118%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101414-ST		
Lab Sample ID:	MC34338-9	Date Sampled:	10/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB59933.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
Run #2							

	Initial Volume	Final Volume
Run #1	35.5 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	89%		36-173%

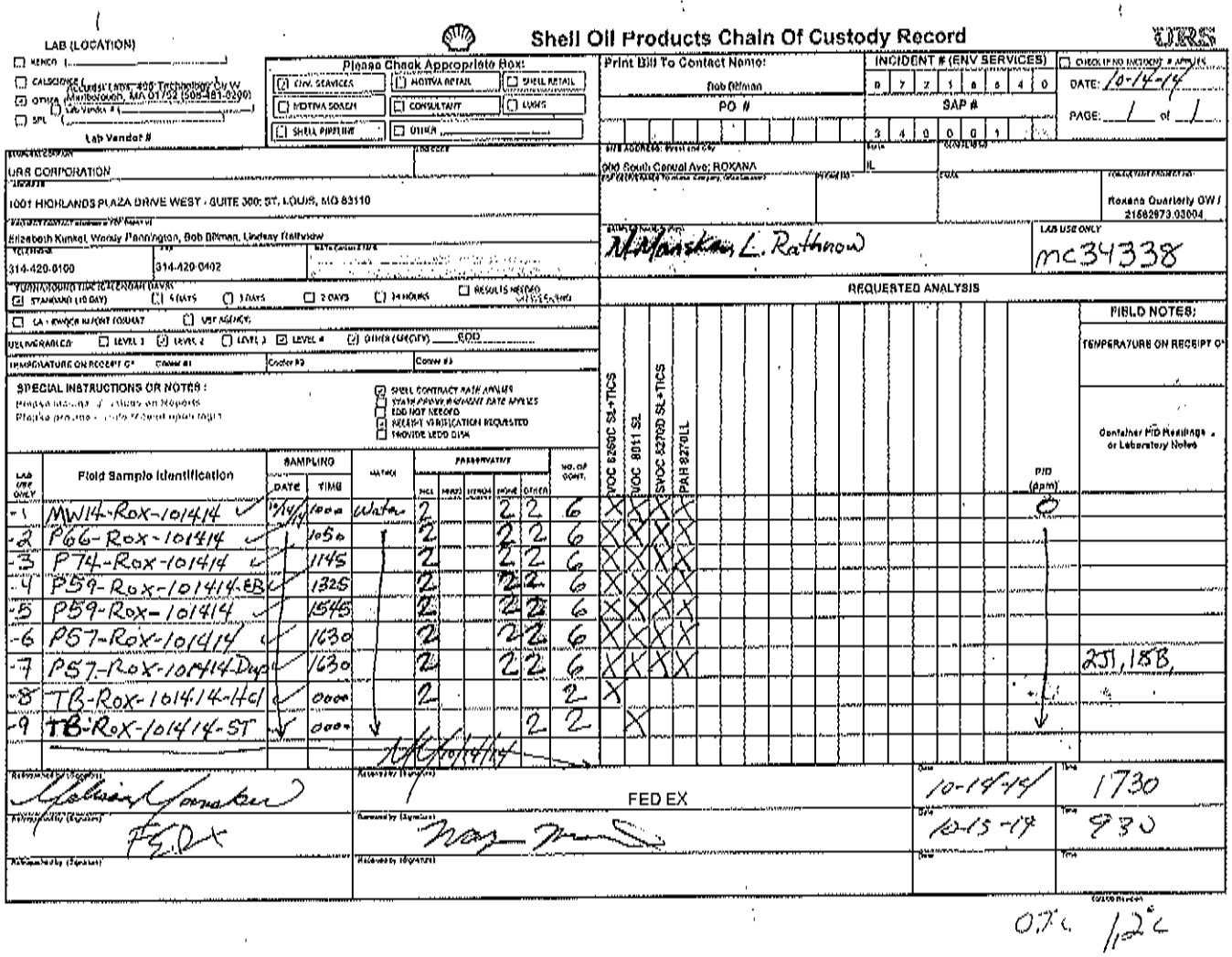
ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)
- [ ] KENCO
- [ ] CALSCIENCE
- [x] OTHER Accutest Labs, 400 Technology Ctr W, Marlborough, MA 01752 (508-481-6200)
- [ ] SPL
- [ ] Lab Vendor #

Lab Vendor #

Please Check Appropriate Box:
- [x] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SOLICIT
- [ ] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 8 5 4 0

SAP #: 3 4 0 0 0 1

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 10-14-14

PAGE: 1 of 1

SUBMITTED COMPANY: URS CORPORATION

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

PROJECT CONTACT (Name of PM Agent): Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathnow

TELEPHONE: 314-420-0100 FAX: 314-420-0402

SITE ADDRESS: Street and City: 900 South Canal Ave; ROXANA

State: IL

CONTACT NO.

FOR DELIVERABLES To Name, Company, Office Location

PHONE NO.

DATE

TOWNSHIP PROJECT NO.: Roxana Quarterly GW / 21582973.03004

SAMPLE NAME (Signature): M Manskar L. Rathnow

LAB USE ONLY: mc34338

TURNAROUND TIME (CALENDAR DAYS): [x] STANDARD (10 DAY) [ ] 5 DAYS [ ] 3 DAYS [ ] 2 DAYS [ ] 24 HOURS [ ] RESULTS NEEDED

- [ ] CA - EWQCB REPORT FORMAT
- [ ] UST AGENCY

DELIVERABLES: [ ] LEVEL 1 [x] LEVEL 2 [ ] LEVEL 3 [x] LEVEL 4 [x] OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
Please include all values on Reports
Please provide a note if sent upon login

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE PROVIDING RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED
- [ ] PROVIDE LEDD DISK

REQUESTED ANALYSIS

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW14-Rox-101414	10/14/14	1000	Water	2			2	2	6	X	X	X	X	0	
-2	P66-Rox-101414		1050		2			2	2	6	X	X	X	X		
-3	P74-Rox-101414		1145		2			2	2	6	X	X	X	X		
-4	P59-Rox-101414-EB		1325		2			2	2	6	X	X	X	X		
-5	P59-Rox-101414		1545		2			2	2	6	X	X	X	X		
-6	P57-Rox-101414		1630		2			2	2	6	X	X	X	X		
-7	P57-Rox-101414-Dup		1630		2			2	2	6	X	X	X	X		2J1, 18B,
-8	TB-Rox-101414-HCl		0000		2					2	X					
-9	TB-Rox-101414-ST		0000						2	2		X				

M 10/14/14

Relinquished by (Signature)	Received by (Signature)	Date	Time
Melissa Manskar	FED EX	10-14-14	1730
FED EX	[signature]	10-15-14	930

Cooler Received

O.T.C. 1.2°C

5.1

5

MC34338: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34338 Client: URS Project: 900 SOUTH CENTRAL

Date / Time Received: 10/15/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #: (1.2/1.2); #1: (0.7/0.7);

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	1

Quality Control Preservation	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 01752
www.accutest.com

5.1

MC34338: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34338

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34338-1 Collected: 14-OCT-14 10:00 By: MMLR Received: 15-OCT-14 By: MW14-ROX-101414						
MC34338-1	SW846 8011	16-OCT-14 14:18	NK	15-OCT-14	NE	V8011SL
MC34338-1	SW846 8270D	20-OCT-14 13:10	KD	16-OCT-14	PA	AB8270SL+
MC34338-1	SW846 8270D BY SIM	23-OCT-14 17:33	WK	16-OCT-14	PA	B8270SIMSL
MC34338-1	SW846 8260C	24-OCT-14 12:00	GK			V8260SL+
MC34338-2 Collected: 14-OCT-14 10:50 By: MMLR Received: 15-OCT-14 By: P66-ROX-101414						
MC34338-2	SW846 8011	16-OCT-14 14:36	NK	15-OCT-14	NE	V8011SL
MC34338-2	SW846 8270D	20-OCT-14 13:34	KD	16-OCT-14	PA	AB8270SL+
MC34338-2	SW846 8270D BY SIM	23-OCT-14 17:56	WK	16-OCT-14	PA	B8270SIMSL
MC34338-2	SW846 8260C	24-OCT-14 12:59	GK			V8260SL+
MC34338-3 Collected: 14-OCT-14 11:45 By: MMLR Received: 15-OCT-14 By: P74-ROX-101414						
MC34338-3	SW846 8011	16-OCT-14 14:54	NK	15-OCT-14	NE	V8011SL
MC34338-3	SW846 8270D	20-OCT-14 13:59	KD	16-OCT-14	PA	AB8270SL+
MC34338-3	SW846 8270D BY SIM	23-OCT-14 18:18	WK	16-OCT-14	PA	B8270SIMSL
MC34338-3	SW846 8260C	24-OCT-14 12:29	GK			V8260SL+
MC34338-4 Collected: 14-OCT-14 13:25 By: MMLR Received: 15-OCT-14 By: P59-ROX-101414-EB						
MC34338-4	SW846 8011	16-OCT-14 15:12	NK	15-OCT-14	NE	V8011SL
MC34338-4	SW846 8270D	20-OCT-14 14:23	KD	16-OCT-14	PA	AB8270SL+
MC34338-4	SW846 8270D BY SIM	23-OCT-14 18:41	WK	16-OCT-14	PA	B8270SIMSL
MC34338-4	SW846 8260C	23-OCT-14 18:47	GK			V8260SL+
MC34338-5 Collected: 14-OCT-14 15:45 By: MMLR Received: 15-OCT-14 By: P59-ROX-101414						
MC34338-5	SW846 8011	16-OCT-14 15:30	NK	15-OCT-14	NE	V8011SL
MC34338-5	SW846 8270D	20-OCT-14 14:48	KD	16-OCT-14	PA	AB8270SL+
MC34338-5	SW846 8270D BY SIM	23-OCT-14 19:04	WK	16-OCT-14	PA	B8270SIMSL
MC34338-5	SW846 8260C	23-OCT-14 19:17	GK			V8260SL+
MC34338-5	SW846 8260C	24-OCT-14 13:28	GK			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34338

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34338-6 Collected: 14-OCT-14 16:30 By: MMLR Received: 15-OCT-14 By: P57-ROX-101414						
MC34338-6	SW846 8011	16-OCT-14 15:48	NK	15-OCT-14	NE	V8011SL
MC34338-6	SW846 8270D	20-OCT-14 15:13	KD	16-OCT-14	PA	AB8270SL+
MC34338-6	SW846 8270D	21-OCT-14 18:00	WK	16-OCT-14	PA	AB8270SL+
MC34338-6	SW846 8260C	23-OCT-14 23:22	GK			V8260SL+
MC34338-6	SW846 8270D BY SIM	27-OCT-14 08:27	WK	16-OCT-14	PA	B8270SIMSL
MC34338-7 Collected: 14-OCT-14 16:00 By: MMLR Received: 15-OCT-14 By: P57-ROX-101414-DUP						
MC34338-7	SW846 8011	16-OCT-14 16:06	NK	15-OCT-14	NE	V8011SL
MC34338-7	SW846 8270D	20-OCT-14 15:37	KD	16-OCT-14	PA	AB8270SL+
MC34338-7	SW846 8270D	21-OCT-14 18:23	WK	16-OCT-14	PA	AB8270SL+
MC34338-7	SW846 8260C	23-OCT-14 23:51	GK			V8260SL+
MC34338-7	SW846 8270D BY SIM	27-OCT-14 08:49	WK	16-OCT-14	PA	B8270SIMSL
MC34338-8 Collected: 14-OCT-14 00:00 By: MMLR Received: 15-OCT-14 By: TB-ROX-101414-HCL						
MC34338-8	SW846 8260C	23-OCT-14 15:16	GK			V8260SL+
MC34338-9 Collected: 14-OCT-14 00:00 By: MMLR Received: 15-OCT-14 By: TB-ROX-101414-ST						
MC34338-9	SW846 8011	16-OCT-14 16:24	NK	15-OCT-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34338-1.1	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-1.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-1.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-1.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-1.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-1.4	VOC Ref #2	Gary Krasinski	10/24/14 10:34	Retrieve from Storage
MC34338-1.4	Gary Krasinski	GCMSL	10/24/14 10:34	Load on Instrument
MC34338-1.4	GCMSL	Gary Krasinski	10/27/14 09:07	Unload from Instrument
MC34338-1.4	Gary Krasinski	VOC Ref #2	10/27/14 09:08	Return to Storage
MC34338-1.5	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-2.1	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-2.3	VOC Ref #2	Gary Krasinski	10/24/14 10:34	Retrieve from Storage
MC34338-2.3	Gary Krasinski	GCMSL	10/24/14 10:34	Load on Instrument
MC34338-2.3	GCMSL	Gary Krasinski	10/27/14 09:07	Unload from Instrument
MC34338-2.3	Gary Krasinski	VOC Ref #2	10/27/14 09:08	Return to Storage
MC34338-2.4	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-2.4	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-2.4	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-2.4	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-2.6	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-3.2	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-3.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-3.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-3.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-3.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-3.4	VOC Ref #2	Gary Krasinski	10/24/14 10:34	Retrieve from Storage
MC34338-3.4	Gary Krasinski	GCMSL	10/24/14 10:34	Load on Instrument
MC34338-3.4	GCMSL	Gary Krasinski	10/27/14 09:07	Unload from Instrument
MC34338-3.4	Gary Krasinski	VOC Ref #2	10/27/14 09:08	Return to Storage
MC34338-3.5	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-4.2	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34338-4.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-4.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-4.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-4.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-4.6	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-5.1	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-5.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-5.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-5.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-5.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-5.4	VOC Ref #2	Gary Krasinski	10/24/14 10:34	Retrieve from Storage
MC34338-5.4	Gary Krasinski	GCMSL	10/24/14 10:34	Load on Instrument
MC34338-5.4	GCMSL	Gary Krasinski	10/27/14 09:07	Unload from Instrument
MC34338-5.4	Gary Krasinski	VOC Ref #2	10/27/14 09:08	Return to Storage
MC34338-5.6	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-6.2	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-6.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-6.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-6.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-6.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-6.5	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-7.2	Walk In Ref #22	Michael DiBuono	10/16/14 08:44	Retrieve from Storage
MC34338-7.3	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-7.3	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-7.3	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-7.3	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage
MC34338-7.5	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage
MC34338-8.2	VOC Ref #2	Gary Krasinski	10/23/14 14:44	Retrieve from Storage
MC34338-8.2	Gary Krasinski	GCMSL	10/23/14 14:44	Load on Instrument
MC34338-8.2	GCMSL	Gary Krasinski	10/24/14 10:33	Unload from Instrument
MC34338-8.2	Gary Krasinski	VOC Ref #2	10/24/14 10:33	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34338-9.1	Walk In Ref #22	Marc Tahtamoni	10/15/14 16:41	Retrieve from Storage

5.3

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

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: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-MB	L87840.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	117%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.2

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.2

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-MB	L87871.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	123%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	31.3	63* a	70-130
107-02-8	Acrolein	250	176	70	70-130
107-13-1	Acrylonitrile	50	38.5	77	70-130
71-43-2	Benzene	50	42.8	86	70-130
108-86-1	Bromobenzene	50	44.3	89	70-130
74-97-5	Bromochloromethane	50	41.8	84	70-130
75-27-4	Bromodichloromethane	50	46.3	93	70-130
75-25-2	Bromoform	50	38.5	77	70-130
74-83-9	Bromomethane	50	45.7	91	70-130
78-93-3	2-Butanone (MEK)	50	40.5	81	70-130
104-51-8	n-Butylbenzene	50	52.0	104	70-130
135-98-8	sec-Butylbenzene	50	48.7	97	70-130
98-06-6	tert-Butylbenzene	50	50.9	102	70-130
75-15-0	Carbon disulfide	50	39.8	80	70-130
56-23-5	Carbon tetrachloride	50	42.3	85	70-130
108-90-7	Chlorobenzene	50	39.3	79	70-130
75-00-3	Chloroethane	50	49.8	100	70-130
110-75-8	2-Chloroethyl vinyl ether	50	36.0	72	70-130
67-66-3	Chloroform	50	49.4	99	70-130
74-87-3	Chloromethane	50	50.8	102	70-130
95-49-8	o-Chlorotoluene	50	49.6	99	70-130
106-43-4	p-Chlorotoluene	50	48.0	96	70-130
124-48-1	Dibromochloromethane	50	45.2	90	70-130
95-50-1	1,2-Dichlorobenzene	50	43.1	86	70-130
541-73-1	1,3-Dichlorobenzene	50	42.8	86	70-130
106-46-7	1,4-Dichlorobenzene	50	41.2	82	70-130
75-71-8	Dichlorodifluoromethane	50	32.2	64* a	70-130
75-34-3	1,1-Dichloroethane	50	49.3	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	45.2	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	70-130
156-60-5	trans-1,2-Dichloroethene	50	42.9	86	70-130
78-87-5	1,2-Dichloropropane	50	42.0	84	70-130
142-28-9	1,3-Dichloropropane	50	39.2	78	70-130
594-20-7	2,2-Dichloropropane	50	60.6	121	70-130
563-58-6	1,1-Dichloropropene	50	45.8	92	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.2	88	70-130
10061-02-6	trans-1,3-Dichloropropene	50	43.6	87	70-130
123-91-1	1,4-Dioxane	125	238	190* b	70-130
97-63-2	Ethyl methacrylate	50	40.1	80	77-137
100-41-4	Ethylbenzene	50	39.8	80	70-130
87-68-3	Hexachlorobutadiene	50	41.3	83	70-130
591-78-6	2-Hexanone	50	31.7	63* a	70-130
98-82-8	Isopropylbenzene	50	49.2	98	70-130
99-87-6	p-Isopropyltoluene	50	46.0	92	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.2	88	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	36.4	73	70-130
74-95-3	Methylene bromide	50	39.6	79	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	51.8	104	70-130
103-65-1	n-Propylbenzene	50	50.3	101	70-130
100-42-5	Styrene	50	42.4	85	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	41.7	83	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	43.6	87	70-130
127-18-4	Tetrachloroethene	50	40.4	81	70-130
108-88-3	Toluene	50	43.2	86	70-130
87-61-6	1,2,3-Trichlorobenzene	50	42.0	84	70-130
120-82-1	1,2,4-Trichlorobenzene	50	43.8	88	70-130
71-55-6	1,1,1-Trichloroethane	50	50.2	100	70-130
79-00-5	1,1,2-Trichloroethane	50	41.1	82	70-130
79-01-6	Trichloroethene	50	40.8	82	70-130
75-69-4	Trichlorofluoromethane	50	43.8	88	70-130
96-18-4	1,2,3-Trichloropropane	50	47.8	96	70-130
95-63-6	1,2,4-Trimethylbenzene	50	48.3	97	70-130
108-67-8	1,3,5-Trimethylbenzene	50	45.6	91	70-130
108-05-4	Vinyl Acetate	50	88.8	178* b	70-130
75-01-4	Vinyl chloride	50	37.8	76	70-130
	m,p-Xylene	100	78.0	78	70-130
95-47-6	o-Xylene	50	41.0	82	70-130
1330-20-7	Xylene (total)	150	119	79	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3916-BS	L87837.D	1	10/23/14	GK	n/a	n/a	MSL3916

6.2.1

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	27.4	55* a	70-130
107-02-8	Acrolein	250	220	88	70-130
107-13-1	Acrylonitrile	50	45.4	91	70-130
71-43-2	Benzene	50	48.9	98	70-130
108-86-1	Bromobenzene	50	51.2	102	70-130
74-97-5	Bromochloromethane	50	51.2	102	70-130
75-27-4	Bromodichloromethane	50	53.4	107	70-130
75-25-2	Bromoform	50	41.9	84	70-130
74-83-9	Bromomethane	50	59.5	119	70-130
78-93-3	2-Butanone (MEK)	50	45.1	90	70-130
104-51-8	n-Butylbenzene	50	59.6	119	70-130
135-98-8	sec-Butylbenzene	50	56.2	112	70-130
98-06-6	tert-Butylbenzene	50	58.5	117	70-130
75-15-0	Carbon disulfide	50	47.1	94	70-130
56-23-5	Carbon tetrachloride	50	48.6	97	70-130
108-90-7	Chlorobenzene	50	42.3	85	70-130
75-00-3	Chloroethane	50	58.0	116	70-130
110-75-8	2-Chloroethyl vinyl ether	50	71.7	143* a	70-130
67-66-3	Chloroform	50	58.0	116	70-130
74-87-3	Chloromethane	50	59.0	118	70-130
95-49-8	o-Chlorotoluene	50	58.8	118	70-130
106-43-4	p-Chlorotoluene	50	56.1	112	70-130
124-48-1	Dibromochloromethane	50	46.9	94	70-130
95-50-1	1,2-Dichlorobenzene	50	48.9	98	70-130
541-73-1	1,3-Dichlorobenzene	50	49.8	100	70-130
106-46-7	1,4-Dichlorobenzene	50	48.0	96	70-130
75-71-8	Dichlorodifluoromethane	50	36.2	72	70-130
75-34-3	1,1-Dichloroethane	50	57.3	115	70-130
107-06-2	1,2-Dichloroethane	50	58.3	117	70-130
75-35-4	1,1-Dichloroethene	50	51.9	104	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	70-130
156-60-5	trans-1,2-Dichloroethene	50	51.2	102	70-130
78-87-5	1,2-Dichloropropane	50	50.0	100	70-130
142-28-9	1,3-Dichloropropane	50	41.2	82	70-130
594-20-7	2,2-Dichloropropane	50	65.5	131* a	70-130
563-58-6	1,1-Dichloropropene	50	52.8	106	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.8	100	70-130
10061-02-6	trans-1,3-Dichloropropene	50	50.9	102	70-130
123-91-1	1,4-Dioxane	125	95.2	76	70-130
97-63-2	Ethyl methacrylate	50	45.9	92	77-137
100-41-4	Ethylbenzene	50	42.5	85	70-130
87-68-3	Hexachlorobutadiene	50	48.6	97	70-130
591-78-6	2-Hexanone	50	32.5	65* a	70-130
98-82-8	Isopropylbenzene	50	57.4	115	70-130
99-87-6	p-Isopropyltoluene	50	53.7	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.0	98	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	37.8	76	70-130
74-95-3	Methylene bromide	50	47.0	94	70-130
75-09-2	Methylene chloride	50	48.1	96	70-130
91-20-3	Naphthalene	50	57.4	115	70-130
103-65-1	n-Propylbenzene	50	58.8	118	70-130
100-42-5	Styrene	50	45.9	92	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	44.7	89	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-130
127-18-4	Tetrachloroethene	50	44.6	89	70-130
108-88-3	Toluene	50	48.5	97	70-130
87-61-6	1,2,3-Trichlorobenzene	50	48.1	96	70-130
120-82-1	1,2,4-Trichlorobenzene	50	50.1	100	70-130
71-55-6	1,1,1-Trichloroethane	50	58.7	117	70-130
79-00-5	1,1,2-Trichloroethane	50	46.7	93	70-130
79-01-6	Trichloroethene	50	45.8	92	70-130
75-69-4	Trichlorofluoromethane	50	50.6	101	70-130
96-18-4	1,2,3-Trichloropropane	50	54.4	109	70-130
95-63-6	1,2,4-Trimethylbenzene	50	56.9	114	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.2	106	70-130
108-05-4	Vinyl Acetate	50	106	212* b	70-130
75-01-4	Vinyl chloride	50	44.0	88	70-130
	m,p-Xylene	100	83.8	84	70-130
95-47-6	o-Xylene	50	42.7	85	70-130
1330-20-7	Xylene (total)	150	127	85	70-130

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL3917-BS	L87869.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	113%	70-130%
2037-26-5	Toluene-D8	106%	70-130%
460-00-4	4-Bromofluorobenzene	122%	70-130%

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

6.2.2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	78.1	31* [b]	250	68.6	27* [b]	13	70-130/30
107-02-8	Acrolein	ND		1250	1500	120	1250	748	60* [b]	67* [c]	70-130/30
107-13-1	Acrylonitrile	ND		250	217	87	250	177	71	20	70-130/30
71-43-2	Benzene	28.0		250	268	96	250	230	81	15	70-130/30
108-86-1	Bromobenzene	ND		250	259	104	250	212	85	20	70-130/30
74-97-5	Bromochloromethane	ND		250	246	98	250	213	85	14	70-130/30
75-27-4	Bromodichloromethane	ND		250	269	108	250	228	91	16	70-130/30
75-25-2	Bromoform	ND		250	211	84	250	179	72	16	70-130/30
74-83-9	Bromomethane	ND		250	326	130	250	210	84	43* [c]	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	200	80	250	137	55* [b]	37* [c]	70-130/30
104-51-8	n-Butylbenzene	ND		250	283	113	250	237	95	18	70-130/30
135-98-8	sec-Butylbenzene	0.83	J	250	279	111	250	231	92	19	70-130/30
98-06-6	tert-Butylbenzene	4.9	J	250	294	116	250	247	97	17	70-130/30
75-15-0	Carbon disulfide	ND		250	222	89	250	185	74	18	70-130/30
56-23-5	Carbon tetrachloride	ND		250	241	96	250	193	77	22	70-130/30
108-90-7	Chlorobenzene	ND		250	207	83	250	175	70	17	70-130/30
75-00-3	Chloroethane	ND		250	350	140* [b]	250	180	72	64* [c]	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	329	132* [b]	250	227	91	37* [c]	70-130/30
67-66-3	Chloroform	ND		250	285	114	250	228	91	22	70-130/30
74-87-3	Chloromethane	ND		250	318	127	250	196	78	47* [c]	70-130/30
95-49-8	o-Chlorotoluene	ND		250	287	115	250	231	92	22	70-130/30
106-43-4	p-Chlorotoluene	ND		250	282	113	250	228	91	21	70-130/30
124-48-1	Dibromochloromethane	ND		250	236	94	250	197	79	18	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	244	98	250	195	78	22	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	245	98	250	201	80	20	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	239	96	250	199	80	18	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	218	87	250	115	46* [b]	62* [c]	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	280	112	250	230	92	20	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	283	113	250	248	99	13	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	253	101	250	200	80	23	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	259	104	250	219	88	17	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	249	100	250	204	82	20	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	245	98	250	208	83	16	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	210	84	250	174	70	19	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	338	135* [b]	250	261	104	26	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	264	106	250	210	84	23	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Compound	MC34231-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	255	102	250	212	85	18	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	262	105	250	213	85	21	70-130/30
123-91-1	1,4-Dioxane	ND		625	561	90	625	492	79	13	70-130/30
97-63-2	Ethyl methacrylate	ND		250	241	96	250	195	78	21	72-139/30
100-41-4	Ethylbenzene	ND		250	214	86	250	176	70	19	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	227	91	250	194	78	16	70-130/30
591-78-6	2-Hexanone	ND		250	129	52* [b]	250	105	42* [b]	21	70-130/30
98-82-8	Isopropylbenzene	1.2	J	250	283	113	250	231	92	20	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	263	105	250	221	88	17	70-130/30
1634-04-4	Methyl Tert Butyl Ether	19.0		250	272	101	250	226	83	18	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	216	86	250	170	68* [b]	24	70-130/30
74-95-3	Methylene bromide	ND		250	235	94	250	194	78	19	70-130/30
75-09-2	Methylene chloride	ND		250	239	96	250	201	80	17	70-130/30
91-20-3	Naphthalene	ND		250	284	114	250	256	102	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	250	240	96	19	70-130/30
100-42-5	Styrene	ND		250	223	89	250	191	76	15	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	228	91	250	194	78	16	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	254	102	250	210	84	19	70-130/30
127-18-4	Tetrachloroethene	ND		250	210	84	250	172	69* [b]	20	70-130/30
108-88-3	Toluene	1.5		250	250	99	250	204	81	20	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	234	94	250	202	81	15	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	244	98	250	208	83	16	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	284	114	250	223	89	24	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	242	97	250	202	81	18	70-130/30
79-01-6	Trichloroethene	ND		250	225	90	250	191	76	16	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	314	126	250	155	62* [b]	68* [c]	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	250	229	92	20	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.58	J	250	273	109	250	225	90	19	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	264	106	250	215	86	20	70-130/30
108-05-4	Vinyl Acetate	ND		250	599	240* [d]	250	501	200* [d]	18	70-130/30
75-01-4	Vinyl chloride	ND		250	268	107	250	139	56* [b]	63* [c]	70-130/30
	m,p-Xylene	2.7		500	414	82	500	344	68* [b]	18	70-130/30
95-47-6	o-Xylene	1.2		250	216	86	250	184	73	16	70-130/30
1330-20-7	Xylene (total)	3.9		750	630	83	750	528	70	18	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34231-7MS [a]	L87844.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7MSD [a]	L87845.D	5	10/23/14	GK	n/a	n/a	MSL3916
MC34231-7	L87843.D	1	10/23/14	GK	n/a	n/a	MSL3916

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

MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-8

CAS No.	Surrogate Recoveries	MS	MSD	MC34231-7	Limits
1868-53-7	Dibromofluoromethane	106%	110%	108%	70-130%
2037-26-5	Toluene-D8	103%	105%	105%	70-130%
460-00-4	4-Bromofluorobenzene	123%	122%	121%	70-130%

(a) Elevated detection limit due to limited sample volume.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.
(d) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

6.3.2

CAS No.	Compound	MC34338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	51.7	21* a	250	73.9	30* a	35* b	70-130/30
107-02-8	Acrolein	ND		1250	1080	86	1250	1050	84	3	70-130/30
107-13-1	Acrylonitrile	ND		250	200	80	250	187	75	7	70-130/30
71-43-2	Benzene	0.68		250	213	85	250	216	86	1	70-130/30
108-86-1	Bromobenzene	ND		250	214	86	250	221	88	3	70-130/30
74-97-5	Bromochloromethane	ND		250	202	81	250	215	86	6	70-130/30
75-27-4	Bromodichloromethane	ND		250	223	89	250	240	96	7	70-130/30
75-25-2	Bromoform	ND		250	179	72	250	191	76	6	70-130/30
74-83-9	Bromomethane	ND		250	201	80	250	243	97	19	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	163	65* a	250	161	64* a	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	242	97	250	252	101	4	70-130/30
135-98-8	sec-Butylbenzene	ND		250	236	94	250	245	98	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	242	97	250	247	99	2	70-130/30
75-15-0	Carbon disulfide	ND		250	196	78	250	193	77	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	211	84	250	213	85	1	70-130/30
108-90-7	Chlorobenzene	ND		250	178	71	250	187	75	5	70-130/30
75-00-3	Chloroethane	ND		250	249	100	250	246	98	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	267	107	250	243	97	9	70-130/30
67-66-3	Chloroform	ND		250	247	99	250	249	100	1	70-130/30
74-87-3	Chloromethane	ND		250	223	89	250	254	102	13	70-130/30
95-49-8	o-Chlorotoluene	ND		250	247	99	250	244	98	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	237	95	250	240	96	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	203	81	250	204	82	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	200	80	250	205	82	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	201	80	250	215	86	7	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	199	80	250	202	81	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	161	64* a	250	166	66* a	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	252	101	250	239	96	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	249	100	250	253	101	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	220	88	250	219	88	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	229	92	250	222	89	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	214	86	250	210	84	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	212	85	250	215	86	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	182	73	250	192	77	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	310	124	250	299	120	4	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	228	91	250	227	91	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Compound	MC34338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	220	88	250	227	91	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	223	89	250	232	93	4	70-130/30
123-91-1	1,4-Dioxane	ND		625	422	68* a	625	554	89	27	70-130/30
97-63-2	Ethyl methacrylate	ND		250	201	80	250	206	82	2	72-139/30
100-41-4	Ethylbenzene	ND		250	185	74	250	189	76	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	189	76	250	205	82	8	70-130/30
591-78-6	2-Hexanone	ND		250	109	44* a	250	110	44* a	1	70-130/30
98-82-8	Isopropylbenzene	ND		250	243	97	250	244	98	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	223	89	250	228	91	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	217	87	250	219	88	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	172	69* a	250	185	74	7	70-130/30
74-95-3	Methylene bromide	ND		250	199	80	250	202	81	1	70-130/30
75-09-2	Methylene chloride	ND		250	206	82	250	203	81	1	70-130/30
91-20-3	Naphthalene	ND		250	243	97	250	263	105	8	70-130/30
103-65-1	n-Propylbenzene	ND		250	244	98	250	250	100	2	70-130/30
100-42-5	Styrene	ND		250	197	79	250	198	79	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	196	78	250	203	81	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	218	87	250	224	90	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	189	76	250	188	75	1	70-130/30
108-88-3	Toluene	ND		250	208	83	250	215	86	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	205	82	250	213	85	4	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	204	82	250	223	89	9	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	252	101	250	248	99	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	208	83	250	208	83	0	70-130/30
79-01-6	Trichloroethene	ND		250	201	80	250	202	81	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	222	89	250	227	91	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	234	94	250	248	99	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	226	90	250	239	96	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	224	90	250	225	90	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	484	194* a	250	484	194* a	0	70-130/30
75-01-4	Vinyl chloride	ND		250	190	76	250	190	76	0	70-130/30
	m,p-Xylene	ND		500	358	72	500	363	73	1	70-130/30
95-47-6	o-Xylene	ND		250	187	75	250	188	75	1	70-130/30
1330-20-7	Xylene (total)	0.43	J	750	545	73	750	551	73	1	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34338-3MS	L87879.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3MSD	L87880.D	5	10/24/14	GK	n/a	n/a	MSL3917
MC34338-3	L87875.D	1	10/24/14	GK	n/a	n/a	MSL3917

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

MC34338-1, MC34338-2, MC34338-3, MC34338-5

CAS No.	Surrogate Recoveries	MS	MSD	MC34338-3	Limits
1868-53-7	Dibromofluoromethane	107%	105%	101%	70-130%
2037-26-5	Toluene-D8	105%	102%	100%	70-130%
460-00-4	4-Bromofluorobenzene	122%	117%	121%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3916-CC3872	Injection Date:	10/23/14
Lab File ID:	L87837.D	Injection Time:	13:18
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
Upper Limit [a]	424544	8.61	585192	9.43	303612	12.62	311574	15.16	59714	6.35
Lower Limit [b]	106136	7.61	146298	8.43	75903	11.62	77894	14.16	14929	5.35
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3916-BS	212272	8.11	292596	8.93	151806	12.12	155787	14.66	29857	5.85
MSL3916-MB	190403	8.12	261904	8.93	128970	12.12	124846	14.66	22434	5.93
MC34338-8	182018	8.12	251932	8.93	124685	12.12	122961	14.66	24885	5.96
ZZZZZZ	208336	8.12	287887	8.93	138839	12.12	140551	14.66	31153	5.92
MC34231-7	200803	8.12	276986	8.93	141791	12.12	141148	14.66	33957	5.90
MC34231-7MS [c]	216131	8.11	292513	8.93	165287	12.11	155038	14.66	35230	5.86
MC34231-7MSD [c]	188322	8.12	254054	8.93	140069	12.12	133976	14.66	26554	5.86
ZZZZZZ	199173	8.12	283066	8.93	134920	12.12	133206	14.66	27509	5.92
ZZZZZZ	166637	8.12	236442	8.93	115318	12.12	110562	14.66	22910	5.93
MC34338-4	202444	8.12	282320	8.93	138421	12.12	134921	14.66	28563	5.95
MC34338-5	182268	8.12	260167	8.93	145036	12.12	129631	14.66	61731 [d]	5.88
ZZZZZZ	232116	8.12	336132	8.93	185445	12.12	168626	14.66	61229 [d]	5.90
ZZZZZZ	264232	8.11	374426	8.93	196834	12.12	183677	14.66	47890	5.91
ZZZZZZ	223455	8.12	311175	8.93	163831	12.12	158667	14.66	37675	5.90
MC34338-6	259470	8.12	355756	8.93	186647	12.12	170686	14.66	38344	5.93
MC34338-7	250215	8.12	347171	8.93	177440	12.12	166979	14.66	34567	5.91
ZZZZZZ	244818	8.12	337139	8.93	165096	12.12	161151	14.66	31202	5.91

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) Elevated detection limit due to limited sample volume.
(d) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSL3917-CC3872	Injection Date:	10/24/14
Lab File ID:	L87867.D	Injection Time:	08:30
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	192143	8.12	261493	8.93	147676	12.12	140484	14.66	27949	5.87
Upper Limit [a]	384286	8.62	522986	9.43	295352	12.62	280968	15.16	55898	6.37
Lower Limit [b]	96072	7.62	130747	8.43	73838	11.62	70242	14.16	13975	5.37
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL3917-BS	181124	8.12	253266	8.93	141879	12.12	132191	14.66	26497	5.87
MSL3917-MB	216954	8.12	296161	8.93	148354	12.12	143669	14.66	28394	5.90
ZZZZZZ	181150	8.12	240485	8.93	123969	12.12	121079	14.66	29806	5.91
ZZZZZZ	184428	8.12	259572	8.93	129776	12.12	130952	14.66	23920	5.89
MC34338-1	186868	8.12	260370	8.93	129671	12.12	129595	14.66	27977	5.90
MC34338-3	201341	8.12	278870	8.93	144112	12.12	138143	14.66	28384	5.93
MC34338-2	174659	8.12	237099	8.93	120360	12.12	120664	14.66	30089	5.89
MC34338-5	186263	8.12	254046	8.93	129025	12.12	126480	14.66	28090	5.88
ZZZZZZ	211344	8.12	299419	8.93	148670	12.12	141946	14.66	31223	5.91
MC34338-3MS	211187	8.11	293300	8.93	165846	12.12	158398	14.66	37072	5.87
MC34338-3MSD	209356	8.11	286056	8.93	159226	12.11	153429	14.66	35479	5.86
ZZZZZZ	209986	8.12	293439	8.93	148277	12.12	146633	14.66	28772	5.90
ZZZZZZ	194642	8.12	265209	8.93	135439	12.12	129987	14.66	26020	5.93
ZZZZZZ	188161	8.12	252387	8.93	124972	12.12	124288	14.66	24047	5.92
ZZZZZZ	188744	8.12	255860	8.93	130988	12.12	123443	14.66	26904	5.91
ZZZZZZ	173349	8.12	248039	8.93	126828	12.12	123533	14.66	24518	5.92
ZZZZZZ	149615	8.12	211885	8.93	103835	12.12	100173	14.66	22227	5.94
ZZZZZZ	149889	8.12	214942	8.93	105207	12.12	98671	14.66	21277	5.92
ZZZZZZ	161170	8.11	227527	8.93	112743	12.12	108727	14.66	22571	5.93
ZZZZZZ	167608	8.12	223341	8.93	110416	12.12	109925	14.66	24585	5.93
ZZZZZZ	165747	8.12	226529	8.93	118498	12.12	111656	14.66	28144	5.92

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.

6.4.2

Volatile Surrogate Recovery Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34338-1	L87874.D	106	101	118
MC34338-2	L87876.D	106	101	121
MC34338-3	L87875.D	101	100	121
MC34338-4	L87848.D	98	100	122
MC34338-5	L87877.D	109	101	124
MC34338-5	L87849.D	100	104	131* a
MC34338-6	L87857.D	108	103	126
MC34338-7	L87858.D	105	102	125
MC34338-8	L87841.D	99	99	118
MC34231-7MS	L87844.D	106	103	123
MC34231-7MSD	L87845.D	110	105	122
MC34338-3MS	L87879.D	107	105	122
MC34338-3MSD	L87880.D	105	102	117
MSL3916-BS	L87837.D	106	103	122
MSL3916-MB	L87840.D	102	100	117
MSL3917-BS	L87869.D	113	106	122
MSL3917-MB	L87871.D	102	101	123

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

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-MB	R40393.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-MB	R40393.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	35%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	15-110%
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	84%	30-130%
1718-51-0	Terphenyl-d14	105%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40232-MB	I92397.D	1	10/23/14	WK	10/16/14	OP40232	MSI3444

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	0.027	0.050	0.013	ug/l	J
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	92%	30-130%
321-60-8	2-Fluorobiphenyl	82%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-BS	R40394.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	19.4	39	30-130
95-57-8	2-Chlorophenol	50	35.2	70	30-130
59-50-7	4-Chloro-3-methyl phenol	50	38.7	77	30-130
120-83-2	2,4-Dichlorophenol	50	39.5	79	30-130
105-67-9	2,4-Dimethylphenol	50	34.8	70	30-130
51-28-5	2,4-Dinitrophenol	50	45.6	91	30-130
534-52-1	4,6-Dinitro-o-cresol	50	48.1	96	30-130
95-48-7	2-Methylphenol	50	31.7	63	30-130
	3&4-Methylphenol	100	61.9	62	30-130
88-75-5	2-Nitrophenol	50	39.5	79	30-130
100-02-7	4-Nitrophenol	50	24.4	49	30-130
87-86-5	Pentachlorophenol	50	43.4	87	30-130
108-95-2	Phenol	50	17.4	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	42.1	84	30-130
88-06-2	2,4,6-Trichlorophenol	50	41.9	84	30-130
62-53-3	Aniline	50	28.0	56	40-140
101-55-3	4-Bromophenyl phenyl ether	50	49.0	98	40-140
85-68-7	Butyl benzyl phthalate	50	50.2	100	40-140
100-51-6	Benzyl Alcohol	50	37.2	74	40-140
91-58-7	2-Chloronaphthalene	50	45.3	91	40-140
106-47-8	4-Chloroaniline	50	43.9	88	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	40.6	81	40-140
111-44-4	bis(2-Chloroethyl)ether	50	30.3	61	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	52.9	106	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.9	90	40-140
122-66-7	1,2-Diphenylhydrazine	50	44.3	89	40-140
121-14-2	2,4-Dinitrotoluene	50	52.6	105	40-140
606-20-2	2,6-Dinitrotoluene	50	47.7	95	40-140
91-94-1	3,3'-Dichlorobenzidine	50	52.4	105	40-140
132-64-9	Dibenzofuran	50	42.6	85	40-140
84-74-2	Di-n-butyl phthalate	50	49.1	98	40-140
117-84-0	Di-n-octyl phthalate	50	51.9	104	40-140
84-66-2	Diethyl phthalate	50	48.8	98	40-140
131-11-3	Dimethyl phthalate	50	46.5	93	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	50.8	102	40-140
118-74-1	Hexachlorobenzene	50	51.3	103	40-140

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-BS	R40394.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	20.3	41	40-140
67-72-1	Hexachloroethane	50	24.4	49	40-140
78-59-1	Isophorone	50	37.3	75	40-140
88-74-4	2-Nitroaniline	50	44.8	90	40-140
99-09-2	3-Nitroaniline	50	47.2	94	40-140
100-01-6	4-Nitroaniline	50	47.2	94	40-140
98-95-3	Nitrobenzene	50	39.9	80	40-140
62-75-9	n-Nitrosodimethylamine	50	27.5	55	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	39.1	78	40-140
86-30-6	N-Nitrosodiphenylamine	50	43.7	87	40-140
110-86-1	Pyridine	50	24.3	49	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	89%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	91%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40232-BS	I92398.D	1	10/23/14	WK	10/16/14	OP40232	MSI3444

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.4	79	40-140
208-96-8	Acenaphthylene	50	35.0	70	40-140
120-12-7	Anthracene	50	44.9	90	40-140
56-55-3	Benzo(a)anthracene	50	53.4	107	40-140
50-32-8	Benzo(a)pyrene	50	50.0	100	40-140
205-99-2	Benzo(b)fluoranthene	50	51.8	104	40-140
191-24-2	Benzo(g,h,i)perylene	50	51.8	104	40-140
207-08-9	Benzo(k)fluoranthene	50	42.1	84	40-140
218-01-9	Chrysene	50	48.9	98	40-140
53-70-3	Dibenzo(a,h)anthracene	50	51.8	104	40-140
206-44-0	Fluoranthene	50	44.7	89	40-140
86-73-7	Fluorene	50	48.9	98	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	51.3	103	40-140
90-12-0	1-Methylnaphthalene	50	35.9	72	40-140
91-57-6	2-Methylnaphthalene	50	35.8	72	40-140
85-01-8	Phenanthrene	50	46.5	93	40-140
129-00-0	Pyrene	50	42.4	85	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-MS	R40395.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
OP40231-MSD	R40396.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
MC34000-22	R40397.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

7.3.1

CAS No.	Compound	MC34000-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	26.1	52	50	24.4	49	7	30-130/20
95-57-8	2-Chlorophenol	ND		50	43.6	87	50	40.7	81	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	52.0	104	50	46.9	94	10	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	51.2	102	50	47.3	95	8	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	41.5	83	50	40.1	80	3	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	58.1	116	50	56.0	112	4	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	60.5	121	50	57.9	116	4	30-130/20
95-48-7	2-Methylphenol	ND		50	39.0	78	50	36.2	72	7	30-130/20
	3&4-Methylphenol	ND		100	78.4	78	100	71.8	72	9	30-130/20
88-75-5	2-Nitrophenol	ND		50	50.2	100	50	46.5	93	8	30-130/20
100-02-7	4-Nitrophenol	ND		50	30.3	61	50	27.6	55	9	30-130/20
87-86-5	Pentachlorophenol	ND		50	55.2	110	50	52.2	104	6	30-130/20
108-95-2	Phenol	ND		50	22.4	45	50	20.5	41	9	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	55.0	110	50	49.5	99	11	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	55.1	110	50	50.2	100	9	30-130/20
62-53-3	Aniline	ND		50	27.6	55	50	27.5	55	0	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	62.6	125	50	57.9	116	8	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	60.7	121	50	56.6	113	7	40-140/20
100-51-6	Benzyl Alcohol	ND		50	44.1	88	50	39.2	78	12	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	57.2	114	50	52.5	105	9	40-140/20
106-47-8	4-Chloroaniline	ND		50	44.0	88	50	44.1	88	0	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	51.2	102	50	46.8	94	9	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	36.5	73	50	33.6	67	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	66.9	134	50	61.0	122	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	59.0	118	50	53.5	107	10	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	55.9	112	50	51.3	103	9	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	63.1	126	50	58.7	117	7	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	59.0	118	50	54.1	108	9	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	52.7	105	50	60.0	120	13	40-140/20
132-64-9	Dibenzofuran	ND		50	54.5	109	50	50.0	100	9	40-140/20
84-74-2	Di-n-butyl phthalate	0.44	J	50	59.5	118	50	55.6	110	7	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	62.5	125	50	59.2	118	5	40-140/20
84-66-2	Diethyl phthalate	ND		50	59.0	118	50	54.6	109	8	40-140/20
131-11-3	Dimethyl phthalate	ND		50	57.9	116	50	52.4	105	10	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	61.6	123	50	56.8	114	8	40-140/20
118-74-1	Hexachlorobenzene	ND		50	65.7	131	50	61.5	123	7	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40231-MS	R40395.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
OP40231-MSD	R40396.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487
MC34000-22	R40397.D	1	10/20/14	KD	10/16/14	OP40231	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

7.3.1

7

CAS No.	Compound	MC34000-22 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	25.7	51	50	27.2	54	6	40-140/20
67-72-1	Hexachloroethane	ND		50	33.7	67	50	34.3	69	2	40-140/20
78-59-1	Isophorone	ND		50	47.6	95	50	43.4	87	9	40-140/20
88-74-4	2-Nitroaniline	ND		50	56.7	113	50	52.2	104	8	40-140/20
99-09-2	3-Nitroaniline	ND		50	47.0	94	50	49.5	99	5	40-140/20
100-01-6	4-Nitroaniline	ND		50	52.4	105	50	51.1	102	3	40-140/20
98-95-3	Nitrobenzene	ND		50	49.1	98	50	45.7	91	7	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	32.4	65	50	30.0	60	8	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	50.6	101	50	45.1	90	11	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	53.6	107	50	50.0	100	7	40-140/20
110-86-1	Pyridine	ND		50	24.2	48	50	20.6	41	16	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-22 Limits	
367-12-4	2-Fluorophenol	56%	51%	48%	15-110%
4165-62-2	Phenol-d5	39%	35%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	110%	101%	80%	15-110%
4165-60-0	Nitrobenzene-d5	89%	81%	74%	30-130%
321-60-8	2-Fluorobiphenyl	89%	81%	72%	30-130%
1718-51-0	Terphenyl-d14	109%	100%	102%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40232-MS	I92399.D	1	10/23/14	WK	10/16/14	OP40232	MSI3444
OP40232-MSD	I92400.D	1	10/23/14	WK	10/16/14	OP40232	MSI3444
MC34000-23	I92401.D	1	10/23/14	WK	10/16/14	OP40232	MSI3444

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7

7.3.2

7

CAS No.	Compound	MC34000-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	49.8	100	50	45.4	91	9	40-140/20
208-96-8	Acenaphthylene	ND		50	44.5	89	50	40.6	81	9	40-140/20
120-12-7	Anthracene	ND		50	53.0	106	50	50.9	102	4	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	64.4	129	50	60.0	120	7	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	59.9	120	50	56.7	113	5	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	68.3	137	50	63.8	128	7	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	63.0	126	50	58.9	118	7	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	52.4	105	50	50.5	101	4	40-140/20
218-01-9	Chrysene	ND		50	58.0	116	50	53.7	107	8	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	62.4	125	50	58.6	117	6	40-140/20
206-44-0	Fluoranthene	ND		50	53.7	107	50	49.7	99	8	40-140/20
86-73-7	Fluorene	ND		50	59.9	120	50	55.3	111	8	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	62.2	124	50	58.7	117	6	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	45.2	90	50	42.6	85	6	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	44.9	90	50	41.9	84	7	40-140/20
85-01-8	Phenanthrene	ND		50	56.8	114	50	52.9	106	7	40-140/20
129-00-0	Pyrene	ND		50	51.0	102	50	47.3	95	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-23 Limits	
4165-60-0	Nitrobenzene-d5	92%	86%	77%	30-130%
321-60-8	2-Fluorobiphenyl	86%	79%	71%	30-130%
1718-51-0	Terphenyl-d14	98%	91%	88%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3371-CC3361	Injection Date:	10/21/14
Lab File ID:	F76953.D	Injection Time:	07:53
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	57928	4.20	199122	5.25	133357	6.78	259437	8.06	333294	10.64	332151	12.35
Upper Limit [a]	115856	4.70	398244	5.75	266714	7.28	518874	8.56	666588	11.14	664302	12.85
Lower Limit [b]	28964	3.70	99561	4.75	66679	6.28	129719	7.56	166647	10.14	166076	11.85
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40254-MB	63443	4.19	219324	5.25	143115	6.77	274688	8.06	322556	10.64	316151	12.35
OP40254-BS	71339	4.20	252954	5.25	160838	6.78	291522	8.06	343638	10.64	321952	12.35
ZZZZZZ	63030	4.19	219279	5.25	143407	6.77	280279	8.06	344289	10.64	334408	12.35
ZZZZZZ	73135	4.20	249585	5.24	164886	6.77	316877	8.06	369603	10.64	342328	12.35
ZZZZZZ	65770	4.19	228019	5.25	150568	6.77	286990	8.06	335989	10.64	321899	12.35
ZZZZZZ	67425	4.19	232940	5.25	150137	6.77	286337	8.06	329425	10.64	312055	12.35
ZZZZZZ	67342	4.20	234329	5.24	153115	6.77	290697	8.06	340458	10.64	319479	12.35
ZZZZZZ	82276	4.20	274240	5.25	177042	6.78	334499	8.06	392779	10.64	399560	12.35
ZZZZZZ	68615	4.20	230663	5.25	151015	6.77	288153	8.06	358591	10.64	365564	12.35
OP40261-MB	73275	4.20	254662	5.25	171369	6.77	331966	8.06	427469	10.64	448055	12.35
OP40261-BS	73796	4.20	257348	5.25	166645	6.78	323119	8.06	416959	10.64	431964	12.36
OP40261-MS	73294	4.20	253391	5.25	162862	6.78	302839	8.06	388422	10.64	403722	12.36
OP40261-MSD	68103	4.20	240446	5.25	157319	6.78	303912	8.06	408647	10.64	418853	12.36
MC34440-1	71058	4.19	243676	5.25	166197	6.77	322182	8.06	405743	10.64	416574	12.36
ZZZZZZ	67837	4.20	234613	5.25	155984	6.78	309582	8.06	379999	10.64	393358	12.35
ZZZZZZ	68038	4.20	237491	5.25	159173	6.78	308101	8.06	384649	10.64	390829	12.36
ZZZZZZ	68096	4.20	240719	5.25	160153	6.77	313376	8.06	381829	10.64	388319	12.36
ZZZZZZ	67588	4.20	234250	5.25	159732	6.77	314559	8.06	399336	10.64	406193	12.35
ZZZZZZ	66363	4.20	229467	5.25	156313	6.78	310990	8.06	388042	10.64	389163	12.36
ZZZZZZ	62096	4.19	215217	5.25	146658	6.77	287040	8.06	376816	10.64	382456	12.36
ZZZZZZ	60884	4.20	214557	5.25	144884	6.78	287328	8.06	366665	10.64	379063	12.35
ZZZZZZ	59944	4.20	206952	5.25	139513	6.78	279886	8.06	350294	10.64	356797	12.35
ZZZZZZ	75725	4.19	259453	5.25	178664	6.77	357878	8.06	431264	10.65	450606	12.36
MC34338-6	60095	4.20	208756	5.25	140689	6.78	272240	8.06	338034	10.64	341842	12.35
MC34338-7	55303	4.20	197156	5.25	133641	6.77	254407	8.06	315048	10.64	320422	12.35

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3444-CC3427	Injection Date:	10/23/14
Lab File ID:	I92396.D	Injection Time:	08:18
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	314150	2.82	708772	3.84	414008	5.33	740529	6.57	675642	9.22	1194217	10.60
Upper Limit [a]	628300	3.32	1417544	4.34	828016	5.83	1481058	7.07	1351284	9.72	2388434	11.10
Lower Limit [b]	157075	2.32	354386	3.34	207004	4.83	370265	6.07	337821	8.72	597109	10.10
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40232-MB	420227	2.82	931645	3.84	542436	5.33	970600	6.57	898515	9.22	1611504	10.61
OP40232-BS	350085	2.82	807802	3.84	465282	5.33	805878	6.57	737877	9.23	1285648	10.61
OP40232-MS	362693	2.82	856128	3.84	486157	5.33	853883	6.57	764969	9.23	1323590	10.61
OP40232-MSD	387105	2.82	906773	3.84	520411	5.33	911704	6.57	839340	9.24	1436391	10.61
MC34000-23	356491	2.82	793456	3.84	458588	5.33	823020	6.56	756860	9.22	1329811	10.60
ZZZZZZ	339961	2.82	764185	3.84	440853	5.33	782917	6.56	735688	9.22	1299314	10.60
ZZZZZZ	356679	2.82	804993	3.84	466847	5.33	817526	6.56	763454	9.22	1357556	10.60

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	279383	2.82	644600	3.84	373968	5.33	667028	6.57	610503	9.22	1064015	10.60
Upper Limit [a]	558766	3.32	1289200	4.34	747936	5.83	1334056	7.07	1221006	9.72	2128030	11.10
Lower Limit [b]	139692	2.32	322300	3.34	186984	4.83	333514	6.07	305252	8.72	532008	10.10
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	345815	2.82	778436	3.84	446372	5.33	791302	6.56	742193	9.22	1298288	10.60
ZZZZZZ	363516	2.82	824379	3.84	475419	5.33	850212	6.56	788775	9.22	1405118	10.60
ZZZZZZ	370348	2.82	823010	3.84	479455	5.33	862229	6.56	793486	9.22	1402664	10.60
ZZZZZZ	357647	2.82	795387	3.84	459926	5.33	826344	6.56	768946	9.22	1354885	10.60
ZZZZZZ	372445	2.83	842079	3.84	471336	5.33	838194	6.56	783493	9.22	1378762	10.60
ZZZZZZ	296387	2.82	650642	3.84	371890	5.34	674648	6.58	655222	9.22	1133480	10.60
ZZZZZZ	286316	2.82	642932	3.84	369235	5.33	680381	6.57	645629	9.22	1132926	10.60
MC34338-1	380327	2.82	844664	3.84	512481	5.33	878012	6.57	833620	9.23	1471264	10.61
MC34338-2	407752	2.82	943127	3.84	620571	5.33	933287	6.57	878512	9.23	1553982	10.61
MC34338-3	470653	2.82	1052429	3.84	601258	5.33	1054930	6.57	993558	9.23	1726372	10.61
MC34338-4	423414	2.82	938563	3.84	543234	5.33	971918	6.57	909071	9.22	1607591	10.61
MC34338-5	312339	2.82	723215	3.84	435193	5.33	735569	6.57	682459	9.22	1204095	10.60
OP40300-MB	319266	2.82	732475	3.84	425924	5.32	765587	6.56	721184	9.22	1257918	10.60
OP40300-BS	319395	2.82	750006	3.84	431900	5.33	775143	6.57	712113	9.23	1238057	10.61
OP40300-MS	325093	2.82	760237	3.84	435680	5.33	763554	6.57	691922	9.23	1204406	10.61
OP40300-MSD	317579	2.82	748522	3.84	430819	5.33	772804	6.57	708264	9.23	1228215	10.61
MC34100-12	368639	2.82	831476	3.84	486004	5.33	880745	6.56	830938	9.22	1478734	10.60
ZZZZZZ	284575	2.82	653275	3.84	378182	5.32	674780	6.56	635914	9.22	1132721	10.60
ZZZZZZ	294345	2.82	664385	3.84	387325	5.32	692835	6.56	645517	9.22	1141928	10.60
ZZZZZZ	294767	2.82	670247	3.84	388334	5.32	688858	6.56	653406	9.22	1166095	10.60
ZZZZZZ	302286	2.82	693596	3.84	398757	5.33	705186	6.56	663393	9.22	1166299	10.60
ZZZZZZ	306751	2.82	705808	3.84	400579	5.33	713274	6.56	667256	9.22	1176538	10.60
ZZZZZZ	284513	2.82	657137	3.84	379123	5.32	664806	6.56	637403	9.22	1129211	10.60
ZZZZZZ	310570	2.82	708592	3.84	409978	5.32	719365	6.56	683768	9.22	1211366	10.60
ZZZZZZ	363327	2.82	850361	3.84	479960	5.33	843509	6.57	785140	9.23	1338912	10.61
ZZZZZZ	321941	2.83	746862	3.84	424023	5.33	761960	6.56	682489	9.22	1179102	10.60
ZZZZZZ	326469	2.82	754969	3.84	432339	5.33	764262	6.56	685648	9.22	1180768	10.60
ZZZZZZ	326914	2.82	745052	3.84	428650	5.33	769185	6.57	715706	9.23	1235310	10.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.3

7

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3447-CC3427	Injection Date:	10/27/14
Lab File ID:	I92479.D	Injection Time:	08:04
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	268106	2.77	596316	3.78	346413	5.27	631391	6.50	591820	9.14	1010905	10.52
Upper Limit [a]	536212	3.27	1192632	4.28	692826	5.77	1262782	7.00	1183640	9.64	2021810	11.02
Lower Limit [b]	134053	2.27	298158	3.28	173207	4.77	315696	6.00	295910	8.64	505453	10.02
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC34338-6	187414	2.77	419482	3.79	255331	5.27	433049	6.51	405605	9.13	704559	10.51
MC34338-7	192207	2.77	430560	3.79	269189	5.27	445569	6.51	418124	9.14	721058	10.51
ZZZZZZ	329657	2.77	735092	3.78	427388	5.27	766850	6.50	730974	9.14	1250315	10.52
ZZZZZZ	328113	2.77	730305	3.78	422657	5.27	753227	6.50	726674	9.14	1198683	10.52
OP40275-MB	263617	2.76	581606	3.78	342016	5.27	607010	6.50	560613	9.13	973006	10.51
OP40275-BS	271861	2.77	607877	3.78	352112	5.27	624060	6.51	581022	9.14	989527	10.52
OP40275-MS	262971	2.77	595532	3.79	346373	5.27	600662	6.51	554525	9.15	935983	10.52
OP40275-MSD	258860	2.77	583186	3.79	340627	5.27	585425	6.51	550245	9.14	933743	10.52
MC34440-19A	281251	2.77	621669	3.78	366082	5.27	639969	6.50	602358	9.14	1038345	10.52
ZZZZZZ	286609	2.76	639577	3.78	374064	5.27	658243	6.50	628610	9.14	1085185	10.52
ZZZZZZ	302121	2.76	673592	3.78	389686	5.27	683371	6.50	649146	9.14	1110008	10.51
ZZZZZZ	268312	2.76	601861	3.78	350938	5.27	623190	6.50	586751	9.14	1007977	10.51
ZZZZZZ	282632	2.76	627724	3.78	366603	5.27	648459	6.50	619482	9.14	1057604	10.52
ZZZZZZ	284811	2.76	632394	3.78	367963	5.27	649430	6.50	613428	9.13	1054677	10.51
ZZZZZZ	297491	2.76	653684	3.78	388361	5.27	665639	6.50	648303	9.14	1085652	10.52

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.4

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1487-CC1481	Injection Date:	10/20/14
Lab File ID:	R40392.D	Injection Time:	09:47
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	336121	4.07	1204764	5.17	724665	6.68	1207568	7.95	1246765	10.23	1085526	11.64
Upper Limit [a]	672242	4.57	2409528	5.67	1449330	7.18	2415136	8.45	2493530	10.73	2171052	12.14
Lower Limit [b]	168061	3.57	602382	4.67	362333	6.18	603784	7.45	623383	9.73	542763	11.14
Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP40231-MB	352941	4.06	1271176	5.17	767738	6.67	1323103	7.94	1347573	10.22	1296360	11.63
OP40231-BS	327483	4.07	1186562	5.17	714494	6.67	1228616	7.94	1293944	10.23	1157802	11.64
OP40231-MS	336568	4.07	1212461	5.17	732482	6.67	1245109	7.94	1303358	10.23	1163618	11.64
OP40231-MSD	375839	4.07	1348574	5.17	809657	6.67	1373225	7.94	1447284	10.23	1271425	11.64
MC34000-22	351707	4.06	1267241	5.17	762171	6.67	1328509	7.94	1347307	10.22	1291928	11.63
ZZZZZZ	370932	4.06	1325361	5.17	800907	6.67	1393040	7.94	1390172	10.22	1319667	11.63
ZZZZZZ	337982	4.06	1209393	5.17	731102	6.67	1252674	7.94	1282256	10.22	1221885	11.63
MC34338-1	368483	4.06	1329526	5.17	809935	6.67	1398317	7.94	1392311	10.22	1331945	11.63
MC34338-2	383271	4.07	1403813	5.17	858707	6.67	1354685	7.94	1452837	10.22	1394073	11.63
MC34338-3	394518	4.07	1408788	5.17	849561	6.67	1463246	7.94	1438510	10.22	1320985	11.63
MC34338-4	404389	4.06	1455717	5.17	879455	6.67	1491851	7.94	1508743	10.22	1405966	11.63
MC34338-5	392128	4.07	1401768	5.17	796201	6.68	1363113	7.94	1389687	10.22	1326502	11.63
MC34338-6	396183	4.07	1427101	5.17	1253697	6.68	1396635	7.94	1456213	10.22	1367947	11.63
MC34338-7	366222	4.07	1307437	5.17	1227675	6.68	1305161	7.94	1355066	10.22	1293918	11.63
OP40242-MB	338068	4.06	1221057	5.17	729916	6.67	1264711	7.93	1290529	10.22	1227242	11.63
OP40242-BS	343417	4.07	1235090	5.17	739075	6.67	1229729	7.94	1288378	10.23	1142571	11.63
OP40242-MS	358417	4.07	1271975	5.17	768096	6.67	1297638	7.94	1372126	10.23	1218572	11.63
OP40242-MSD	364345	4.07	1301853	5.17	783897	6.67	1322333	7.94	1370567	10.23	1196731	11.63
MC34100-1	346145	4.06	1251666	5.17	756419	6.67	1291896	7.93	1276322	10.22	1190287	11.63
ZZZZZZ	356319	4.06	1269704	5.17	761862	6.67	1313877	7.93	1286069	10.22	1184761	11.63
ZZZZZZ	367877	4.06	1316024	5.17	797324	6.67	1371394	7.93	1350126	10.22	1244117	11.63
ZZZZZZ	331004	4.07	1182535	5.17	711423	6.67	1218131	7.93	1198694	10.22	1117662	11.63
ZZZZZZ	338288	4.07	1219625	5.17	733754	6.67	1253735	7.93	1212859	10.22	1138053	11.63
ZZZZZZ	319384	4.07	1158691	5.17	729774	6.67	1129224	7.94	1168688	10.22	1098321	11.63
ZZZZZZ	355514	4.06	1264985	5.17	771256	6.67	1311075	7.93	1249534	10.22	1133437	11.63
ZZZZZZ	349712	4.06	1246710	5.17	761029	6.67	1303718	7.93	1253860	10.22	1160321	11.63
ZZZZZZ	364605	4.07	1308436	5.17	785818	6.67	1354386	7.93	1302994	10.22	1220026	11.63

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.5 7

Semivolatile Internal Standard Area Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1487-CC1481	Injection Date:	10/20/14
Lab File ID:	R40392.D	Injection Time:	09:47
Instrument ID:	GCMSR	Method:	SW846 8270D

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.5

Semivolatile Surrogate Recovery Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34338-1	R40400.D	48	32	96	72	67	95
MC34338-2	R40401.D	47	33	99	70	68	92
MC34338-3	R40402.D	38	26	87	64	62	91
MC34338-4	R40403.D	41	28	80	66	63	95
MC34338-5	R40404.D	50	27	99	58	69	96
MC34338-6	F76979.D	65	43	140* [a]	98	82	116
MC34338-6	R40405.D	49	34	109	77	44	100
MC34338-7	F76980.D	59	44	135* [a]	93	79	108
MC34338-7	R40406.D	48	33	102	75	49	98
OP40231-BS	R40394.D	45	31	89	72	71	91
OP40231-MB	R40393.D	54	35	94	86	84	105
OP40231-MS	R40395.D	56	39	110	89	89	109
OP40231-MSD	R40396.D	51	35	101	81	81	100

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits due to dilution.

Semivolatile Surrogate Recovery Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34338-1	I92416.D	77	63	83
MC34338-2	I92417.D	72	57	81
MC34338-3	I92418.D	67	62	80
MC34338-4	I92419.D	69	63	83
MC34338-5	I92420.D	75	78	102
MC34338-6	I92480.D	80	66	85
MC34338-7	I92481.D	77	66	83
OP40232-BS	I92398.D	76	70	83
OP40232-MB	I92397.D	92	82	92
OP40232-MS	I92399.D	92	86	98
OP40232-MSD	I92400.D	86	79	91

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MB	BB59914.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-9

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	100%	36-173%
460-00-4	Bromofluorobenzene (S)	101%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-BS	BB59915.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.078	110	60-140
106-93-4	1,2-Dibromoethane	0.071	0.068	96	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	90%	36-173%
460-00-4	Bromofluorobenzene (S)	93%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40218-MS	BB59916.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
OP40218-MSD	BB59917.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334
MC34000-20	BB59918.D	1	10/16/14	NK	10/15/14	OP40218	GBB3334

The QC reported here applies to the following samples: Method: SW846 8011

MC34338-1, MC34338-2, MC34338-3, MC34338-4, MC34338-5, MC34338-6, MC34338-7, MC34338-9

CAS No.	Compound	MC34000-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.081	114	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.074	104	0.071	0.072	101	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34000-20	Limits
460-00-4	Bromofluorobenzene (S)	75%	70%	68%	36-173%
460-00-4	Bromofluorobenzene (S)	75%	71%	68%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34338-1	BB59926.D	90	100
MC34338-2	BB59927.D	75	111
MC34338-3	BB59928.D	88	92
MC34338-4	BB59929.D	90	96
MC34338-5	BB59930.D	52	88
MC34338-6	BB59931.D	55	97
MC34338-7	BB59932.D	52	96
MC34338-9	BB59933.D	86	89
OP40218-BS	BB59915.D	90	93
OP40218-MB	BB59914.D	100	101
OP40218-MS	BB59916.D	75	75
OP40218-MSD	BB59917.D	70	71

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3334-ICC3334	Injection Date:	10/16/14
Lab File ID:	BB59910.D	Injection Time:	09:22
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40218-MB	BB59914.D	10/16/14	10:43	3.45	3.47
OP40218-BS	BB59915.D	10/16/14	11:01	3.45	3.46
OP40218-MS	BB59916.D	10/16/14	11:19	3.45	3.46
OP40218-MSD	BB59917.D	10/16/14	11:37	3.45	3.46
MC34000-20	BB59918.D	10/16/14	11:55	3.45	3.46
ZZZZZZ	BB59919.D	10/16/14	12:13	3.45	3.46
ZZZZZZ	BB59920.D	10/16/14	12:30	3.45	3.46
ZZZZZZ	BB59921.D	10/16/14	12:48	3.45	3.46
ZZZZZZ	BB59922.D	10/16/14	13:06	3.45	3.46
ZZZZZZ	BB59923.D	10/16/14	13:24	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34338
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3334-CC3334	Injection Date:	10/16/14
Lab File ID:	BB59924.D	Injection Time:	13:42
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.45	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB59925.D	10/16/14	14:00	3.45	3.46
MC34338-1	BB59926.D	10/16/14	14:18	3.45	3.46
MC34338-2	BB59927.D	10/16/14	14:36	3.45	3.46
MC34338-3	BB59928.D	10/16/14	14:54	3.45	3.46
MC34338-4	BB59929.D	10/16/14	15:12	3.45	3.46
MC34338-5	BB59930.D	10/16/14	15:30	3.45	3.46
MC34338-6	BB59931.D	10/16/14	15:48	3.45	3.46
MC34338-7	BB59932.D	10/16/14	16:06	3.45	3.46
MC34338-9	BB59933.D	10/16/14	16:24	3.45	3.46
GBB3334-ECC333B	BB59934.D	10/16/14	16:42	3.45	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34365

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/13/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
P93A-ROX-101514	P93A-ROX-101514-Dup
P58-ROX-101514	P93C-ROX-101514
P93D-ROX-101514	P93B-ROX-101514
TB-ROX-101514-HCL	TB-ROX-101514-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated bis(2-ethylhexyl)phthalate was detected in the method blank. VOC LCS recoveries were outside evaluation criteria. The VOC surrogate phenol-d_5 was outside evaluation criteria for sample P93A-ROX-101514-Dup. Tert butyl alcohol-d_9 internal standard area recovery was outside criteria in samples P58-ROX-101514 and P93B-ROX-101514. Several samples were diluted due to high levels of VOCs. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for 2,2-dichloropropane exceeded 30 percent difference (%D). Also, the continuing calibration verification for acrolein exceeded 40%D, and for 1,2-dibromo-3-chloropropane and 1,2-dibromoethane exceeded 15%D.

The cooler receipt form did not indicate any problems.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP40242-MB	SVOCs	bis(2-Ethylhexyl)phthalate	3.0 µg/L

Qualifications due to blank contamination are included in the table below. Analytical

data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93A-ROX-101514	SVOCs	bis(2-Ethylhexyl)phthalate	-	**U**
P93A-ROX-101514-Dup	SVOCs	bis(2-Ethylhexyl)phthalate	4.1 µg/L	**U**
P58-ROX-101514	SVOCs	bis(2-Ethylhexyl)phthalate	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1307-BS	VOCs	Acetone	**60**	70-130
MSV1307-BS	VOCs	Acrolein	**166**	70-130
MSV1307-BS	VOCs	1,4-Dioxane	**202**	70-130
MSV1307-BS	VOCs	1,1,2,2-Tetrachloroethane	**141**	70-130
MSV1310-BS	VOCs	Acetone	**134**	70-130
MSV1310-BS	VOCs	Carbon disulfide	**132**	70-130
MSV1310-BS	VOCs	1,4-Dioxane	**202**	70-130
MSV1310-BS	VOCs	1,1,2,2-Tetrachloroethane	**138**	70-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSV1307-BS was associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P93B-ROX-101514	VOCs	Acetone	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P93A-ROX-101514-Dup Run#1	SVOCs	Phenol-d_5	**13**	15-110
P93A-ROX-101514-Dup Run#2	SVOCs	Phenol-d_5	**14**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P93A-ROX-101514-Dup	SVOCs	All non-detects	**UJ**
P93A-ROX-101514-Dup	SVOCs	All detects	**J**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

No

Sample ID	Parameter	Analyte	IS Area Recovery	IS Criteria
P58-ROX-101514	VOCs	Tert butyl alcohol-d_9	**50360**	54216-216862
P93B-ROX-101514	VOCs	Tert butyl alcohol-d_9	**46754**	54216-216862

There were no target analytes associated with tert butyl alcohol-d_9; therefore, no qualification of data was required based on tert butyl alcohol-d_9.

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P93A-ROX-101514	P93A-ROX-101514-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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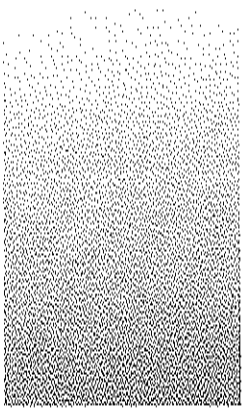
11/13/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34365

Sampling Date: 10/15/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **113**

Reviewed on 11/13/14

Reza Rand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34365

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34365-1	10/15/14	10:45	MML	R10/16/14	AQ	Ground Water	P93A-ROX-101514
MC34365-2	10/15/14	10:45	MML	R10/16/14	AQ	Ground Water	P93A-ROX-101514-DUP
MC34365-3	10/15/14	11:45	MML	R10/16/14	AQ	Ground Water	P58-ROX-101514
MC34365-4	10/15/14	13:45	MML	R10/16/14	AQ	Ground Water	P93C-ROX-101514
MC34365-5	10/15/14	14:30	MML	R10/16/14	AQ	Ground Water	P93D-ROX-101514
MC34365-6	10/15/14	15:00	MML	R10/16/14	AQ	Ground Water	P93B-ROX-101514
MC34365-7	10/15/14	00:00	MML	R10/16/14	AQ	Trip Blank Water	TB-ROX-101514-HCL
MC34365-8	10/15/14	00:00	MML	R10/16/14	AQ	Trip Blank Water	TB-ROX-101514-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34365
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Centra	**Report Date**	10/30/2014 12:22:48 PM

6 Sample(s) and 2 Trip Blank(s) were collected on 10/15/2014 and were received at Accutest on 10/16/2014 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of MC34365. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix: AQ **Batch ID:** MSV1307

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34408-1MS, MC34408-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC34365-3, MC34365-6 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.
- Blank Spike Recovery(s) for Acetone, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Acetone, Acrolein, 2-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample MC34408-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV1307-BS for 1,4-Dioxane,1,1,2,2-Tetrachloroethane: Outside control limits. Associated samples are non-detect for this compound.
- MC34408-1MSD for 1,4-Dioxane: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification standard MSV1296-ICV1296 for 2,2-dichloropropane exceed 30% Difference (response bias high). Associated samples are non-detect for this compound.
- Continuing calibration check standard MSV1307-CC1296 for acrolein exceed 40% Difference (response bias high). Associated samples are non-detect for this compound.

Matrix: AQ **Batch ID:** MSV1308

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34509-2MS, MC34509-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ **Batch ID:** MSV1310

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC34464-4MS, MC34464-4MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Acetone, Carbon disulfide are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,1-Dichloroethene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Carbon disulfide, Chloromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ	Batch ID: MSV1310

- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Carbon disulfide, Chloromethane are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.
- RPD(s) for MSD for 1,4-Dioxane are outside control limits for sample MC34464-4MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV1310-BS, MC34464-4MS for 1,1,2,2-Tetrachloroethane: Outside control limits. Associated samples are non-detect for this compound.
- MSV1310-BS, MC34464-4MSD for 1,4-Dioxane: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP40242

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-1MS, MC34100-1MSD were used as the QC samples indicated.
- Sample(s) MC34365-1, MC34365-3 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Matrix Spike Duplicate Recovery(s) for Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dimethylphenol, Aniline, Pyridine are outside control limits for sample OP40242-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.
- MC34365-2: Confirmation run for surrogate recoveries.
- MC34365-2 for Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by reanalysis. Insufficient sample volume for re-extraction.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP40243

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-2MS, MC34100-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP40305

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-13MS, MC34100-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing alibration standard GBB3339-CC3339, file BB60054 for 1,2-Dibromo-3-chloropropane (signal #1), check standard file BB60065 for 1,2-Dibromoethane (signal #1), 1,2-Dibromo-3-chloropropane (signal #1, #2) exceed 15% difference (response biased high). Associated samples are non-detect for this compound.

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(MC34365).

Summary of Hits

Job Number: MC34365
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/15/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34365-1	P93A-ROX-101514					
Benzene		293000	1000	630	ug/l	SW846 8260C
Ethylbenzene		229 J	500	190	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		442 J	2500	160	ug/l	SW846 8260C
o-Xylene		263 J	500	180	ug/l	SW846 8260C
Xylene (total)		650	500	180	ug/l	SW846 8260C
Phenol		47.1	5.2	0.31	ug/l	SW846 8270D
Dibenzofuran		0.30 J	2.1	0.27	ug/l	SW846 8270D
Di-n-butyl phthalate		0.24 J	5.2	0.18	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		~~0.40~~ JB U	2.1	0.34	ug/l	SW846 8270D
Acenaphthene		0.20	0.10	0.071	ug/l	SW846 8270D BY SIM
Fluorene		0.37	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		11.4	2.1	0.52	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		9.5	2.1	0.52	ug/l	SW846 8270D BY SIM
Phenanthrene		0.30	0.052	0.013	ug/l	SW846 8270D BY SIM
MC34365-2	P93A-ROX-101514-DUP					
Benzene		277000 J	1000	630	ug/l	SW846 8260C
Ethylbenzene		226 J	500	190	ug/l	SW846 8260C
o-Xylene		258 J	500	180	ug/l	SW846 8260C
Xylene (total)		635	500	180	ug/l	SW846 8260C
Phenol		50.0	5.4	0.33	ug/l	SW846 8270D
bis(2-Chloroethyl)ether		4.4 J	5.4	0.38	ug/l	SW846 8270D
Dibenzofuran		0.33 J	2.2	0.28	ug/l	SW846 8270D
Di-n-butyl phthalate		0.46 J	5.4	0.19	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		~~4.1~~ UJ	2.2	0.36	ug/l	SW846 8270D
Nitrobenzene		1.1 J J	5.4	0.43	ug/l	SW846 8270D
Acenaphthene		0.22	0.11	0.075	ug/l	SW846 8270D BY SIM
Fluorene		0.39	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		12.2	2.2	0.54	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		10.1	2.2	0.54	ug/l	SW846 8270D BY SIM
Phenanthrene		0.30	0.054	0.014	ug/l	SW846 8270D BY SIM
MC34365-3	P58-ROX-101514					
Benzene		493000	1000	630	ug/l	SW846 8260C
Ethylbenzene		793	500	190	ug/l	SW846 8260C
Isopropylbenzene		1430 J	2500	170	ug/l	SW846 8260C
n-Propylbenzene		781 J	2500	250	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		720 J	2500	160	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		453 J	2500	190	ug/l	SW846 8260C
o-Xylene		253 J	500	180	ug/l	SW846 8260C
Xylene (total)		718	500	180	ug/l	SW846 8260C

Summary of Hits

Job Number: MC34365
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/15/14

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
3&4-Methylphenol	23.7	11	0.51	ug/l	SW846 8270D
Phenol	145	5.4	0.33	ug/l	SW846 8270D
bis(2-Chloroethyl)ether	14.0	5.4	0.38	ug/l	SW846 8270D
Dibenzofuran	2.2	2.2	0.28	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate	~~0.42 JB~~ U	2.2	0.36	ug/l	SW846 8270D
Acenaphthene	0.58	0.11	0.075	ug/l	SW846 8270D BY SIM
Acenaphthylene	0.23	0.11	0.054	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene	0.13	0.054	0.021	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene	0.11	0.11	0.031	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene	0.074	0.054	0.034	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene	0.065 J	0.11	0.029	ug/l	SW846 8270D BY SIM
Chrysene	0.18	0.11	0.026	ug/l	SW846 8270D BY SIM
Fluoranthene	0.064 J	0.11	0.044	ug/l	SW846 8270D BY SIM
Fluorene	1.5	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene	50.4	2.2	0.54	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene	67.4	2.2	0.54	ug/l	SW846 8270D BY SIM
Phenanthrene	1.0	0.054	0.014	ug/l	SW846 8270D BY SIM
Pyrene	0.24	0.11	0.042	ug/l	SW846 8270D BY SIM
MC34365-4 P93C-ROX-101514					
Benzene	0.75	0.50	0.32	ug/l	SW846 8260C
Methyl Tert Butyl Ether	4.6	1.0	0.51	ug/l	SW846 8260C
MC34365-5 P93D-ROX-101514					
Benzene	36400	250	160	ug/l	SW846 8260C
1,2,4-Trimethylbenzene	8.3 J	50	3.2	ug/l	SW846 8260C
Phenol	45.8	5.4	0.33	ug/l	SW846 8270D
Di-n-butyl phthalate	0.31 J	5.4	0.19	ug/l	SW846 8270D
Phenanthrene	0.019 J	0.054	0.014	ug/l	SW846 8270D BY SIM
MC34365-6 P93B-ROX-101514					
Benzene	241000	1000	630	ug/l	SW846 8260C
Phenol	128	5.6	0.34	ug/l	SW846 8270D
Di-n-butyl phthalate	0.24 J	5.6	0.19	ug/l	SW846 8270D
MC34365-7 TB-ROX-101514-HCL					
No hits reported in this sample.					
MC34365-8 TB-ROX-101514-ST					
No hits reported in this sample.					

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36140.D	500	10/29/14	AMY	n/a	n/a	MSV1310
Run #2	V36082.D	2000	10/28/14	AMY	n/a	n/a	MSV1308

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5000	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	293000 [a]	1000	630	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1300	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	630	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	229	500	190	ug/l	J
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	442	2500	160	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	263	500	180	ug/l	J
1330-20-7	Xylene (total)	650	500	180	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	103%	70-130%
2037-26-5	Toluene-D8	96%	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	101%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40414.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.32	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.85	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.41	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.58	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.48	ug/l	
88-75-5	2-Nitrophenol	ND	10	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.55	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.2	ug/l	
108-95-2	Phenol	47.1	5.2	0.31	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.38	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.49	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.55	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.32	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.57	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.36	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.34	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.47	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.31	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.28	ug/l	
132-64-9	Dibenzofuran	0.30	2.1	0.27	ug/l	J
84-74-2	Di-n-butyl phthalate	0.24	5.2	0.18	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.2	0.29	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.2	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.35	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	~~0.40~~ 4	2.1	0.34	ug/l	JB 4
118-74-1	Hexachlorobenzene	ND	5.2	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.31	ug/l	
78-59-1	Isophorone	ND	5.2	0.46	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.41	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.40	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.20	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92314.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.20	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.040	ug/l	
218-01-9	Chrysene	ND	0.10	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.042	ug/l	
86-73-7	Fluorene	0.37	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.032	ug/l	
90-12-0	1-Methylnaphthalene	11.4	2.1	0.52	ug/l	
91-57-6	2-Methylnaphthalene	9.5	2.1	0.52	ug/l	
85-01-8	Phenanthrene	0.30	0.052	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514		
Lab Sample ID:	MC34365-1	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60049.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	71%		36-173%
460-00-4	Bromofluorobenzene (S)	88%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36141.D	500	10/29/14	AMY	n/a	n/a	MSV1310
Run #2	V36085.D	2000	10/28/14	AMY	n/a	n/a	MSV1308

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5000	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	277000 [a]	1000	630	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1300	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	630	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	226	500	190	ug/l	J
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	160	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	258	500	180	ug/l	J
1330-20-7	Xylene (total)	635	500	180	ug/l	

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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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	104%	70-130%
2037-26-5	Toluene-D8	93%	97%	70-130%
460-00-4	4-Bromofluorobenzene	103%	101%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40462.D	1	10/22/14	KD	10/16/14	OP40242	MSR1489
Run #2 [a]	R40415.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2	920 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	50.0	5.4	0.33	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	4.4	5.4	0.38	ug/l	J UJ
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	UJ
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	0.33	2.2	0.28	ug/l	J J
84-74-2	Di-n-butyl phthalate	0.46	5.4	0.19	ug/l	J J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	UJ

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	UJ
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	UJ
117-81-7	bis(2-Ethylhexyl)phthalate	~~4.1~~ 4	~~2.2~~ 4.1	0.36	ug/l	UJ
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	1.1	5.4	0.43	ug/l	JJ
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	19%	20%	15-110%
4165-62-2	Phenol-d5	13% [b]	14% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	53%	52%	15-110%
4165-60-0	Nitrobenzene-d5	30%	34%	30-130%
321-60-8	2-Fluorobiphenyl	36%	35%	30-130%
1718-51-0	Terphenyl-d14	49%	51%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis. Insufficient sample volume for re-extraction.

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92316.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.22	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	0.39	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	12.2	2.2	0.54	ug/l	
91-57-6	2-Methylnaphthalene	10.1	2.2	0.54	ug/l	
85-01-8	Phenanthrene	0.30	0.054	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	84%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P93A-ROX-101514-DUP		
Lab Sample ID:	MC34365-2	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60050.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	70%		36-173%
460-00-4	Bromofluorobenzene (S)	89%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36142.D	500	10/29/14	AMY	n/a	n/a	MSV1310
Run #2	V36066.D	2000	10/28/14	AMY	n/a	n/a	MSV1307

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5000	1300	ug/l	
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	493000 [a]	1000	630	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1300	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	630	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	793	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	1430	2500	170	ug/l	J
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	781	2500	250	ug/l	J
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	720	2500	160	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	453	2500	190	ug/l	J
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	253	500	180	ug/l	J
1330-20-7	Xylene (total)	718	500	180	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	99%	70-130%
2037-26-5	Toluene-D8	97%	96%	70-130%
460-00-4	4-Bromofluorobenzene	103%	100%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40416.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	23.7	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	145	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	14.0	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	2.2	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.3

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	~~0.42~~ 4	2.2	0.36	ug/l	JB 4
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	109%		15-110%
4165-60-0	Nitrobenzene-d5	88%		30-130%
321-60-8	2-Fluorobiphenyl	85%		30-130%
1718-51-0	Terphenyl-d14	101%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92323.D	1	10/20/14	WK	10/16/14	OP40243	MSI3441
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.58	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.23	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	0.13	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	0.11	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	0.074	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.065	0.11	0.029	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	0.18	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	0.064	0.11	0.044	ug/l	J
86-73-7	Fluorene	1.5	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	50.4	2.2	0.54	ug/l	
91-57-6	2-Methylnaphthalene	67.4	2.2	0.54	ug/l	
85-01-8	Phenanthrene	1.0	0.054	0.014	ug/l	
129-00-0	Pyrene	0.24	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P58-ROX-101514		
Lab Sample ID:	MC34365-3	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60051.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	71%		36-173%
460-00-4	Bromofluorobenzene (S)	83%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36137.D	1	10/29/14	AMY	n/a	n/a	MSV1310
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.75	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.6	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

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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:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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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:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40417.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

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Report of Analysis

Client Sample ID:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	102%		15-110%
4165-60-0	Nitrobenzene-d5	89%		30-130%
321-60-8	2-Fluorobiphenyl	84%		30-130%
1718-51-0	Terphenyl-d14	104%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92324.D	1	10/20/14	WK	10/16/14	OP40243	MSI3441
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		30-130%
321-60-8	2-Fluorobiphenyl	81%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93C-ROX-101514		
Lab Sample ID:	MC34365-4	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60052.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	64%		36-173%
460-00-4	Bromofluorobenzene (S)	73%		36-173%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36143.D	10	10/29/14	AMY	n/a	n/a	MSV1310
Run #2	V36086.D	500	10/28/14	AMY	n/a	n/a	MSV1308

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	25	ug/l	
107-02-8	Acrolein	ND	250	60	ug/l	
107-13-1	Acrylonitrile	ND	50	21	ug/l	
71-43-2	Benzene	36400 [a]	250	160	ug/l	
108-86-1	Bromobenzene	ND	50	3.5	ug/l	
74-97-5	Bromochloromethane	ND	50	5.7	ug/l	
75-27-4	Bromodichloromethane	ND	10	3.4	ug/l	
75-25-2	Bromoform	ND	10	6.1	ug/l	
74-83-9	Bromomethane	ND	20	18	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	25	ug/l	
104-51-8	n-Butylbenzene	ND	50	11	ug/l	
135-98-8	sec-Butylbenzene	ND	50	4.2	ug/l	
98-06-6	tert-Butylbenzene	ND	50	3.9	ug/l	
75-15-0	Carbon disulfide	ND	50	4.6	ug/l	
56-23-5	Carbon tetrachloride	ND	10	5.3	ug/l	
108-90-7	Chlorobenzene	ND	10	4.3	ug/l	
75-00-3	Chloroethane	ND	20	5.3	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	50	33	ug/l	
67-66-3	Chloroform	ND	10	4.1	ug/l	
74-87-3	Chloromethane	ND	20	11	ug/l	
95-49-8	o-Chlorotoluene	ND	50	3.8	ug/l	
106-43-4	p-Chlorotoluene	ND	50	4.5	ug/l	
124-48-1	Dibromochloromethane	ND	10	3.8	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	3.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	5.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	3.6	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	7.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	3.6	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	5.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	6.1	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	8.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	5.1	ug/l	

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Report of Analysis

Client Sample ID:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	20	5.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	8.9	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	13	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	4.7	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	4.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	5.0	ug/l	
123-91-1	1,4-Dioxane	ND	250	110	ug/l	
97-63-2	Ethyl methacrylate	ND	50	5.0	ug/l	
100-41-4	Ethylbenzene	ND	10	3.8	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	17	ug/l	
591-78-6	2-Hexanone	ND	50	16	ug/l	
98-82-8	Isopropylbenzene	ND	50	3.5	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	3.7	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	5.1	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	9.9	ug/l	
74-95-3	Methylene bromide	ND	50	5.2	ug/l	
75-09-2	Methylene chloride	ND	20	2.8	ug/l	
91-20-3	Naphthalene	ND	50	6.9	ug/l	
103-65-1	n-Propylbenzene	ND	50	4.9	ug/l	
100-42-5	Styrene	ND	50	8.5	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	4.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	4.0	ug/l	
127-18-4	Tetrachloroethene	ND	10	5.9	ug/l	
108-88-3	Toluene	ND	10	3.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	6.8	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	4.6	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	4.5	ug/l	
79-01-6	Trichloroethene	ND	10	4.7	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	5.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	8.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	8.3	50	3.2	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	50	3.8	ug/l	
108-05-4	Vinyl Acetate	ND	50	7.1	ug/l	
75-01-4	Vinyl chloride	ND	10	5.8	ug/l	
	m,p-Xylene	ND	10	9.3	ug/l	
95-47-6	o-Xylene	ND	10	3.6	ug/l	
1330-20-7	Xylene (total)	ND	10	3.6	ug/l	

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Report of Analysis

Client Sample ID:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	106%	70-130%
2037-26-5	Toluene-D8	98%	95%	70-130%
460-00-4	4-Bromofluorobenzene	107%	102%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40418.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.90	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.43	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.61	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.51	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	45.8	5.4	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.40	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.51	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.58	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.61	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.31	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.38	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.36	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.50	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.29	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	0.31	5.4	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.4	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.37	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.36	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.33	ug/l	
78-59-1	Isophorone	ND	5.4	0.49	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.43	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	97%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	102%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92325.D	1	10/20/14	WK	10/16/14	OP40243	MSI3441
Run #2							

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.054	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.054	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.054	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.042	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.044	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.54	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.54	ug/l	
85-01-8	Phenanthrene	0.019	0.054	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.042	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93D-ROX-101514		
Lab Sample ID:	MC34365-5	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60053.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	61%		36-173%
460-00-4	Bromofluorobenzene (S)	74%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36068.D	500	10/28/14	AMY	n/a	n/a	MSV1307
Run #2	V36087.D	2000	10/28/14	AMY	n/a	n/a	MSV1308

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	5000	1300	ug/l	UJ
107-02-8	Acrolein	ND	13000	3000	ug/l	
107-13-1	Acrylonitrile	ND	2500	1100	ug/l	
71-43-2	Benzene	241000 [a]	1000	630	ug/l	
108-86-1	Bromobenzene	ND	2500	170	ug/l	
74-97-5	Bromochloromethane	ND	2500	280	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	310	ug/l	
74-83-9	Bromomethane	ND	1000	880	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1300	ug/l	
104-51-8	n-Butylbenzene	ND	2500	540	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	210	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	190	ug/l	
75-15-0	Carbon disulfide	ND	2500	230	ug/l	
56-23-5	Carbon tetrachloride	ND	500	270	ug/l	
108-90-7	Chlorobenzene	ND	500	210	ug/l	
75-00-3	Chloroethane	ND	1000	270	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	1700	ug/l	
67-66-3	Chloroform	ND	500	210	ug/l	
74-87-3	Chloromethane	ND	1000	540	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	190	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	220	ug/l	
124-48-1	Dibromochloromethane	ND	500	190	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	280	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	180	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	360	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	180	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	250	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	300	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	420	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	250	ug/l	

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	1000	250	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	450	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	630	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	240	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	210	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	250	ug/l	
123-91-1	1,4-Dioxane	ND	13000	5400	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	250	ug/l	
100-41-4	Ethylbenzene	ND	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	830	ug/l	
591-78-6	2-Hexanone	ND	2500	800	ug/l	
98-82-8	Isopropylbenzene	ND	2500	170	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	190	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	260	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	490	ug/l	
74-95-3	Methylene bromide	ND	2500	260	ug/l	
75-09-2	Methylene chloride	ND	1000	140	ug/l	
91-20-3	Naphthalene	ND	2500	340	ug/l	
103-65-1	n-Propylbenzene	ND	2500	250	ug/l	
100-42-5	Styrene	ND	2500	430	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	220	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	200	ug/l	
127-18-4	Tetrachloroethene	ND	500	300	ug/l	
108-88-3	Toluene	ND	500	170	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	340	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	230	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethene	ND	500	240	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	270	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	410	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	160	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	190	ug/l	
108-05-4	Vinyl Acetate	ND	2500	360	ug/l	
75-01-4	Vinyl chloride	ND	500	290	ug/l	
	m,p-Xylene	ND	500	470	ug/l	
95-47-6	o-Xylene	ND	500	180	ug/l	
1330-20-7	Xylene (total)	ND	500	180	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	107%	70-130%
2037-26-5	Toluene-D8	98%	95%	70-130%
460-00-4	4-Bromofluorobenzene	102%	103%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40419.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	128	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.24	5.6	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL;Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	53%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	192326.D	1	10/20/14	WK	10/16/14	OP40243	MSI3441
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	0.56	ug/l	
85-01-8	Phenanthrene	ND	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	88%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	P93B-ROX-101514		
Lab Sample ID:	MC34365-6	Date Sampled:	10/15/14
Matrix:	AQ - Ground Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60055.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	76%		36-173%
460-00-4	Bromofluorobenzene (S)	91%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101514-HCL		
Lab Sample ID:	MC34365-7	Date Sampled:	10/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36048.D	1	10/27/14	AMY	n/a	n/a	MSV1307
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101514-HCL		
Lab Sample ID:	MC34365-7	Date Sampled:	10/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

ND = Not detected MDL = Method Detection Limit
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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:	TB-ROX-101514-HCL		
Lab Sample ID:	MC34365-7	Date Sampled:	10/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101514-ST		
Lab Sample ID:	MC34365-8	Date Sampled:	10/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60056.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	69%		36-173%
460-00-4	Bromofluorobenzene (S)	76%		36-173%

ND = Not detected MDL = Method Detection Limit
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

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ SENCO (_____)
☐ CALSCIENCE (Accutest Lab, 4th Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☑ OTHER
☐ SEL (Lab Vendor # _____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOUCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Bitman

PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 8 8 4 0

SAP #: 3 4 0 0 0 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-15-14

PAGE: 1 of 1

COMPANY NAME: URS CORPORATION

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

PROJECT CONTACT (Leading to Any Reports): Elizabeth Kunkel, Wendy Pennington, Bob Bitman, Lindsay Rathnow

TELEPHONE: 314-429-0100 FAX: 314-429-0402 EMAIL: bitman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com, lindsay.rathnow@urs.com

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON/BY: END

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE CERTIFICATION RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ MICROWIN, EDD DISK

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA

STATE: IL

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21582973.03004

COMPLETION DATE: M.Mansker, L.Rathnow

LAB USE ONLY: MC34365

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93A-Rox-101514	10/15/14	1045	water	2			2	2	6	X	X	X	X	0	
-2	P93A-Rox-101514-Dup		1045		2			2	2	6	X	X	X	X		
-3	P58-Rox-101514		1145		2			2	2	6	X	X	X	X		
-4	P93C-Rox-101514		1345		2			2	2	6	X	X	X	X		
-5	P93D-Rox-101514		1430		2			2	2	6	X	X	X	X		
-6	P93B-Rox-101514		1500		2			2	2	6	X	X	X	X		
-7	TB-Rox-101514-HCL	0000	0000		2					2	X					18C, 2K4, 2L2
-8	TB-Rox-101514-ST	0000	0000						2	2		X				

M.Mansker 10/15/14

Relinquished by (Signature)	Received by (Signature)	Date	Time
Melissa Mansker	FED EX	10-15-14	
FEDX	[signature]	10-15-14	830

20°C - 2.0°C

MC34365: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34365 Client: URS Project: 900 SOUTH CENTRAL AVE

Date / Time Received: 10/16/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (2/2); #2: (2/2);

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. Thermometer ID:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservation	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

5.1

MC34365: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34365

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34365-1 Collected: 15-OCT-14 10:45 By: MMLR Received: 16-OCT-14 By: P93A-ROX-101514						
MC34365-1	SW846 8270D BY SIM	20-OCT-14 13:07	WK	16-OCT-14	AJ	B8270SIMSL
MC34365-1	SW846 8270D	20-OCT-14 18:53	KD	16-OCT-14	AJ	AB8270SL+
MC34365-1	SW846 8011	23-OCT-14 17:09	NK	21-OCT-14	FC	V8011SL
MC34365-1	SW846 8260C	28-OCT-14 11:05	AMY			V8260SL+
MC34365-1	SW846 8260C	29-OCT-14 15:09	AMY			V8260SL+
MC34365-2 Collected: 15-OCT-14 10:45 By: MMLR Received: 16-OCT-14 By: P93A-ROX-101514-DUP						
MC34365-2	SW846 8270D BY SIM	20-OCT-14 13:52	WK	16-OCT-14	AJ	B8270SIMSL
MC34365-2	SW846 8270D	20-OCT-14 19:17	KD	16-OCT-14	AJ	AB8270SL+
MC34365-2	SW846 8270D	22-OCT-14 13:04	KD	16-OCT-14	AJ	AB8270SL+
MC34365-2	SW846 8011	23-OCT-14 17:27	NK	21-OCT-14	FC	V8011SL
MC34365-2	SW846 8260C	28-OCT-14 12:26	AMY			V8260SL+
MC34365-2	SW846 8260C	29-OCT-14 15:36	AMY			V8260SL+
MC34365-3 Collected: 15-OCT-14 11:45 By: MMLR Received: 16-OCT-14 By: P58-ROX-101514						
MC34365-3	SW846 8270D BY SIM	20-OCT-14 16:13	WK	16-OCT-14	AJ	B8270SIMSL
MC34365-3	SW846 8270D	20-OCT-14 19:41	KD	16-OCT-14	AJ	AB8270SL+
MC34365-3	SW846 8011	23-OCT-14 17:45	NK	21-OCT-14	FC	V8011SL
MC34365-3	SW846 8260C	28-OCT-14 03:50	AMY			V8260SL+
MC34365-3	SW846 8260C	29-OCT-14 16:03	AMY			V8260SL+
MC34365-4 Collected: 15-OCT-14 13:45 By: MMLR Received: 16-OCT-14 By: P93C-ROX-101514						
MC34365-4	SW846 8270D BY SIM	20-OCT-14 16:36	WK	16-OCT-14	AJ	B8270SIMSL
MC34365-4	SW846 8270D	20-OCT-14 20:06	KD	16-OCT-14	AJ	AB8270SL+
MC34365-4	SW846 8011	23-OCT-14 18:03	NK	21-OCT-14	FC	V8011SL
MC34365-4	SW846 8260C	29-OCT-14 13:49	AMY			V8260SL+
MC34365-5 Collected: 15-OCT-14 14:30 By: MMLR Received: 16-OCT-14 By: P93D-ROX-101514						
MC34365-5	SW846 8270D BY SIM	20-OCT-14 16:58	WK	16-OCT-14	AJ	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34365

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34365-5	SW846 8270D	20-OCT-14 20:30	KD	16-OCT-14	AJ	AB8270SL+
MC34365-5	SW846 8011	23-OCT-14 18:21	NK	21-OCT-14	FC	V8011SL
MC34365-5	SW846 8260C	28-OCT-14 12:53	AMY			V8260SL+
MC34365-5	SW846 8260C	29-OCT-14 16:29	AMY			V8260SL+
MC34365-6 Collected: 15-OCT-14 15:00 By: MMLR Received: 16-OCT-14 By: P93B-ROX-101514						
MC34365-6	SW846 8270D BY SIM	20-OCT-14 17:21	WK	16-OCT-14	AJ	B8270SIMSL
MC34365-6	SW846 8270D	20-OCT-14 20:55	KD	16-OCT-14	AJ	AB8270SL+
MC34365-6	SW846 8011	23-OCT-14 18:56	NK	21-OCT-14	FC	V8011SL
MC34365-6	SW846 8260C	28-OCT-14 04:43	AMY			V8260SL+
MC34365-6	SW846 8260C	28-OCT-14 13:20	AMY			V8260SL+
MC34365-7 Collected: 15-OCT-14 00:00 By: MMLR Received: 16-OCT-14 By: TB-ROX-101514-HCL						
MC34365-7	SW846 8260C	27-OCT-14 19:53	AMY			V8260SL+
MC34365-8 Collected: 15-OCT-14 00:00 By: MMLR Received: 16-OCT-14 By: TB-ROX-101514-ST						
MC34365-8	SW846 8011	23-OCT-14 19:14	NK	21-OCT-14	FC	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34365-1.1	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage
MC34365-1.1	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-1.3	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-1.3	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-1.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-1.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-1.4	VOC Ref #2	Amy Min Yang	10/28/14 10:30	Retrieve from Storage
MC34365-1.4	Amy Min Yang	GCMSV	10/28/14 10:30	Load on Instrument
MC34365-1.4	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-1.4	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-1.6	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-1.6	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-2.1	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage
MC34365-2.1	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-2.3	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-2.3	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-2.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-2.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-2.4	VOC Ref #2	Amy Min Yang	10/28/14 10:30	Retrieve from Storage
MC34365-2.4	Amy Min Yang	GCMSV	10/28/14 10:30	Load on Instrument
MC34365-2.4	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-2.4	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-2.6	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-2.6	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-3.2	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage
MC34365-3.2	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-3.3	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-3.3	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-3.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-3.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-3.5	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-3.5	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-4.1	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34365-4.1	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-4.3	VOC Ref #2	Amy Min Yang	10/28/14 10:30	Retrieve from Storage
MC34365-4.3	Amy Min Yang	GCMSV	10/28/14 10:30	Load on Instrument
MC34365-4.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-4.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-4.4	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-4.4	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-4.4	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-4.4	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-4.6	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-4.6	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-5.2	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage
MC34365-5.2	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-5.3	VOC Ref #2	Amy Min Yang	10/28/14 10:30	Retrieve from Storage
MC34365-5.3	Amy Min Yang	GCMSV	10/28/14 10:30	Load on Instrument
MC34365-5.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-5.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-5.4	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-5.4	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-5.4	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-5.4	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-5.6	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-5.6	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-6.1	Walk In Ref #22	Marc Tahtamoni	10/16/14 19:12	Retrieve from Storage
MC34365-6.1	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-6.3	VOC Ref #2	Amy Min Yang	10/28/14 10:30	Retrieve from Storage
MC34365-6.3	Amy Min Yang	GCMSV	10/28/14 10:30	Load on Instrument
MC34365-6.3	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-6.3	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-6.4	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-6.4	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-6.4	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-6.4	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34365-6.5	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-6.5	Marc Tahtamoni		11/11/14 17:36	Depleted
MC34365-7.1	VOC Ref #2	Amy Min Yang	10/27/14 18:04	Retrieve from Storage
MC34365-7.1	Amy Min Yang	GCMSV	10/27/14 18:04	Load on Instrument
MC34365-7.1	GCMSV	Amy Min Yang	10/28/14 17:12	Unload from Instrument
MC34365-7.1	Amy Min Yang	VOC Ref #2	10/28/14 17:12	Return to Storage
MC34365-8.2	VOC Ref #2	Marc Tahtamoni	10/21/14 14:41	Retrieve from Storage
MC34365-8.2	Marc Tahtamoni		11/11/14 17:36	Depleted

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: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-MB	V36047.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-MB	V36047.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-MB	V36047.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1308-MB	V36078.D	1	10/28/14	AMY	n/a	n/a	MSV1308

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

MC34365-1, MC34365-2, MC34365-5, MC34365-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.2

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-MB	V36134.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-MB	V36134.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-MB	V36134.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1308-MB1	V36134.D	1	10/29/14	AMY	n/a	n/a	MSV1308

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

MC34365-1, MC34365-2, MC34365-5, MC34365-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.4

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-BS	V36043.D	1	10/27/14	AMY	n/a	n/a	MSV1307

6.2.1

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	30.1	60* a	70-130
107-02-8	Acrolein	250	415	166* a	70-130
107-13-1	Acrylonitrile	50	55.5	111	70-130
71-43-2	Benzene	50	59.0	118	70-130
108-86-1	Bromobenzene	50	56.9	114	70-130
74-97-5	Bromochloromethane	50	54.0	108	70-130
75-27-4	Bromodichloromethane	50	55.8	112	70-130
75-25-2	Bromoform	50	52.0	104	70-130
74-83-9	Bromomethane	50	55.1	110	70-130
78-93-3	2-Butanone (MEK)	50	44.2	88	70-130
104-51-8	n-Butylbenzene	50	55.7	111	70-130
135-98-8	sec-Butylbenzene	50	48.9	98	70-130
98-06-6	tert-Butylbenzene	50	50.9	102	70-130
75-15-0	Carbon disulfide	50	52.0	104	70-130
56-23-5	Carbon tetrachloride	50	40.1	80	70-130
108-90-7	Chlorobenzene	50	57.1	114	70-130
75-00-3	Chloroethane	50	60.7	121	70-130
110-75-8	2-Chloroethyl vinyl ether	50	55.3	111	70-130
67-66-3	Chloroform	50	51.0	102	70-130
74-87-3	Chloromethane	50	52.6	105	70-130
95-49-8	o-Chlorotoluene	50	58.4	117	70-130
106-43-4	p-Chlorotoluene	50	56.8	114	70-130
124-48-1	Dibromochloromethane	50	53.9	108	70-130
95-50-1	1,2-Dichlorobenzene	50	57.7	115	70-130
541-73-1	1,3-Dichlorobenzene	50	57.4	115	70-130
106-46-7	1,4-Dichlorobenzene	50	55.9	112	70-130
75-71-8	Dichlorodifluoromethane	50	51.9	104	70-130
75-34-3	1,1-Dichloroethane	50	52.0	104	70-130
107-06-2	1,2-Dichloroethane	50	48.3	97	70-130
75-35-4	1,1-Dichloroethene	50	60.9	122	70-130
156-59-2	cis-1,2-Dichloroethene	50	58.8	118	70-130
156-60-5	trans-1,2-Dichloroethene	50	58.5	117	70-130
78-87-5	1,2-Dichloropropane	50	62.5	125	70-130
142-28-9	1,3-Dichloropropane	50	61.1	122	70-130
594-20-7	2,2-Dichloropropane	50	63.5	127	70-130
563-58-6	1,1-Dichloropropene	50	59.5	119	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-BS	V36043.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	61.1	122	70-130
10061-02-6	trans-1,3-Dichloropropene	50	60.8	122	70-130
123-91-1	1,4-Dioxane	125	253	202* b	70-130
97-63-2	Ethyl methacrylate	50	53.9	108	77-137
100-41-4	Ethylbenzene	50	62.2	124	70-130
87-68-3	Hexachlorobutadiene	50	56.0	112	70-130
591-78-6	2-Hexanone	50	41.6	83	70-130
98-82-8	Isopropylbenzene	50	50.8	102	70-130
99-87-6	p-Isopropyltoluene	50	47.6	95	70-130
1634-04-4	Methyl Tert Butyl Ether	50	49.3	99	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.3	101	70-130
74-95-3	Methylene bromide	50	55.7	111	70-130
75-09-2	Methylene chloride	50	56.6	113	70-130
91-20-3	Naphthalene	50	62.0	124	70-130
103-65-1	n-Propylbenzene	50	50.8	102	70-130
100-42-5	Styrene	50	62.5	125	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	58.7	117	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	70.5	141* b	70-130
127-18-4	Tetrachloroethene	50	53.2	106	70-130
108-88-3	Toluene	50	57.9	116	70-130
87-61-6	1,2,3-Trichlorobenzene	50	55.9	112	70-130
120-82-1	1,2,4-Trichlorobenzene	50	54.4	109	70-130
71-55-6	1,1,1-Trichloroethane	50	50.7	101	70-130
79-00-5	1,1,2-Trichloroethane	50	62.8	126	70-130
79-01-6	Trichloroethene	50	49.5	99	70-130
75-69-4	Trichlorofluoromethane	50	45.5	91	70-130
96-18-4	1,2,3-Trichloropropane	50	57.6	115	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.6	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	50.5	101	70-130
108-05-4	Vinyl Acetate	50	55.8	112	70-130
75-01-4	Vinyl chloride	50	60.0	120	70-130
	m,p-Xylene	100	126	126	70-130
95-47-6	o-Xylene	50	55.3	111	70-130
1330-20-7	Xylene (total)	150	181	121	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1307-BS	V36043.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1308-BS	V36074.D	1	10/28/14	AMY	n/a	n/a	MSV1308

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

MC34365-1, MC34365-2, MC34365-5, MC34365-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	56.4	113	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

* = Outside of Control Limits.

6.2.2

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-BS	V36131.D	1	10/29/14	AMY	n/a	n/a	MSV1310

6.2.3

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	67.1	134*	70-130
107-02-8	Acrolein	250	287	115	70-130
107-13-1	Acrylonitrile	50	59.2	118	70-130
71-43-2	Benzene	50	59.4	119	70-130
108-86-1	Bromobenzene	50	55.1	110	70-130
74-97-5	Bromochloromethane	50	54.6	109	70-130
75-27-4	Bromodichloromethane	50	54.1	108	70-130
75-25-2	Bromoform	50	48.0	96	70-130
74-83-9	Bromomethane	50	52.0	104	70-130
78-93-3	2-Butanone (MEK)	50	62.5	125	70-130
104-51-8	n-Butylbenzene	50	50.8	102	70-130
135-98-8	sec-Butylbenzene	50	44.6	89	70-130
98-06-6	tert-Butylbenzene	50	47.0	94	70-130
75-15-0	Carbon disulfide	50	66.1	132*	70-130
56-23-5	Carbon tetrachloride	50	37.8	76	70-130
108-90-7	Chlorobenzene	50	53.9	108	70-130
75-00-3	Chloroethane	50	57.9	116	70-130
110-75-8	2-Chloroethyl vinyl ether	50	52.6	105	70-130
67-66-3	Chloroform	50	50.5	101	70-130
74-87-3	Chloromethane	50	59.9	120	70-130
95-49-8	o-Chlorotoluene	50	55.7	111	70-130
106-43-4	p-Chlorotoluene	50	55.4	111	70-130
124-48-1	Dibromochloromethane	50	51.4	103	70-130
95-50-1	1,2-Dichlorobenzene	50	54.8	110	70-130
541-73-1	1,3-Dichlorobenzene	50	54.0	108	70-130
106-46-7	1,4-Dichlorobenzene	50	52.2	104	70-130
75-71-8	Dichlorodifluoromethane	50	42.5	85	70-130
75-34-3	1,1-Dichloroethane	50	53.2	106	70-130
107-06-2	1,2-Dichloroethane	50	50.9	102	70-130
75-35-4	1,1-Dichloroethene	50	64.2	128	70-130
156-59-2	cis-1,2-Dichloroethene	50	58.8	118	70-130
156-60-5	trans-1,2-Dichloroethene	50	59.2	118	70-130
78-87-5	1,2-Dichloropropane	50	61.4	123	70-130
142-28-9	1,3-Dichloropropane	50	59.8	120	70-130
594-20-7	2,2-Dichloropropane	50	59.1	118	70-130
563-58-6	1,1-Dichloropropene	50	57.9	116	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-BS	V36131.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	59.1	118	70-130
10061-02-6	trans-1,3-Dichloropropene	50	59.2	118	70-130
123-91-1	1,4-Dioxane	125	253	202* b	70-130
97-63-2	Ethyl methacrylate	50	50.9	102	77-137
100-41-4	Ethylbenzene	50	57.1	114	70-130
87-68-3	Hexachlorobutadiene	50	48.5	97	70-130
591-78-6	2-Hexanone	50	62.8	126	70-130
98-82-8	Isopropylbenzene	50	46.6	93	70-130
99-87-6	p-Isopropyltoluene	50	43.2	86	70-130
1634-04-4	Methyl Tert Butyl Ether	50	48.9	98	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	52.8	106	70-130
74-95-3	Methylene bromide	50	56.3	113	70-130
75-09-2	Methylene chloride	50	60.0	120	70-130
91-20-3	Naphthalene	50	57.7	115	70-130
103-65-1	n-Propylbenzene	50	47.5	95	70-130
100-42-5	Styrene	50	57.7	115	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	53.9	108	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	69.1	138* b	70-130
127-18-4	Tetrachloroethene	50	47.8	96	70-130
108-88-3	Toluene	50	54.5	109	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.9	106	70-130
120-82-1	1,2,4-Trichlorobenzene	50	49.7	99	70-130
71-55-6	1,1,1-Trichloroethane	50	47.4	95	70-130
79-00-5	1,1,2-Trichloroethane	50	59.7	119	70-130
79-01-6	Trichloroethene	50	47.4	95	70-130
75-69-4	Trichlorofluoromethane	50	38.5	77	70-130
96-18-4	1,2,3-Trichloropropane	50	46.8	94	70-130
95-63-6	1,2,4-Trimethylbenzene	50	49.7	99	70-130
108-67-8	1,3,5-Trimethylbenzene	50	47.3	95	70-130
108-05-4	Vinyl Acetate	50	59.5	119	70-130
75-01-4	Vinyl chloride	50	57.8	116	70-130
	m,p-Xylene	100	114	114	70-130
95-47-6	o-Xylene	50	50.0	100	70-130
1330-20-7	Xylene (total)	150	164	109	70-130

* = Outside of Control Limits.

6.2.3

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1310-BS	V36131.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	105%	70-130%

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

* = Outside of Control Limits.

6.2.3

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34408-1MS	V36056.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1MSD	V36057.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1	V36053.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	MC34408-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	133	53* [a]	250	134	54* [a]	1	70-130/30
107-02-8	Acrolein	ND		1250	1790	143* [a]	1250	1800	144* [a]	1	70-130/30
107-13-1	Acrylonitrile	ND		250	250	100	250	229	92	9	70-130/30
71-43-2	Benzene	ND		250	280	112	250	275	110	2	70-130/30
108-86-1	Bromobenzene	ND		250	271	108	250	270	108	0	70-130/30
74-97-5	Bromochloromethane	ND		250	245	98	250	240	96	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	272	109	250	267	107	2	70-130/30
75-25-2	Bromoform	ND		250	229	92	250	224	90	2	70-130/30
74-83-9	Bromomethane	ND		250	284	114	250	263	105	8	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	191	76	250	191	76	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	274	110	250	271	108	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	242	97	250	242	97	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	260	104	250	264	106	2	70-130/30
75-15-0	Carbon disulfide	ND		250	237	95	250	219	88	8	70-130/30
56-23-5	Carbon tetrachloride	ND		250	203	81	250	188	75	8	70-130/30
108-90-7	Chlorobenzene	ND		250	272	109	250	267	107	2	70-130/30
75-00-3	Chloroethane	ND		250	314	126	250	285	114	10	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	250	24.1	10* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		250	247	99	250	242	97	2	70-130/30
74-87-3	Chloromethane	ND		250	298	119	250	276	110	8	70-130/30
95-49-8	o-Chlorotoluene	ND		250	291	116	250	291	116	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	285	114	250	283	113	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	249	100	250	245	98	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	268	107	250	270	108	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	274	110	250	271	108	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	263	105	250	264	106	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	258	103	250	226	90	13	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	246	98	250	233	93	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	239	96	250	233	93	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	272	109	250	254	102	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	266	106	250	260	104	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	267	107	250	245	98	9	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	303	121	250	296	118	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	275	110	250	274	110	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	279	112	250	262	105	6	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	286	114	250	279	112	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34408-1MS	V36056.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1MSD	V36057.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1	V36053.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Compound	MC34408-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	281	112	250	277	111	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	281	112	250	275	110	2	70-130/30
123-91-1	1,4-Dioxane	ND		625	616	99	625	820	131* c	28	70-130/30
97-63-2	Ethyl methacrylate	ND		250	234	94	250	226	90	3	72-139/30
100-41-4	Ethylbenzene	ND		250	301	120	250	296	118	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	257	103	250	268	107	4	70-130/30
591-78-6	2-Hexanone	ND		250	178	71	250	174	70	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	250	100	250	252	101	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	234	94	250	232	93	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	1.2		250	199	79	250	190	76	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	217	87	250	213	85	2	70-130/30
74-95-3	Methylene bromide	ND		250	261	104	250	257	103	2	70-130/30
75-09-2	Methylene chloride	ND		250	257	103	250	239	96	7	70-130/30
91-20-3	Naphthalene	ND		250	227	91	250	253	101	11	70-130/30
103-65-1	n-Propylbenzene	ND		250	253	101	250	253	101	0	70-130/30
100-42-5	Styrene	ND		250	294	118	250	287	115	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	275	110	250	276	110	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	318	127	250	315	126	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	247	99	250	246	98	0	70-130/30
108-88-3	Toluene	ND		250	283	113	250	273	109	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	200	80	250	231	92	14	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	220	88	250	230	92	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	249	100	250	232	93	7	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	294	118	250	281	112	5	70-130/30
79-01-6	Trichloroethene	ND		250	236	94	250	232	93	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	246	98	250	216	86	13	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	272	109	250	271	108	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	269	108	250	260	104	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	253	101	250	252	101	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	268	107	250	255	102	5	70-130/30
75-01-4	Vinyl chloride	ND		250	331	132* a	250	302	121	9	70-130/30
	m,p-Xylene	ND		500	605	121	500	591	118	2	70-130/30
95-47-6	o-Xylene	ND		250	272	109	250	262	105	4	70-130/30
1330-20-7	Xylene (total)	ND		750	877	117	750	853	114	3	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34408-1MS	V36056.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1MSD	V36057.D	5	10/27/14	AMY	n/a	n/a	MSV1307
MC34408-1	V36053.D	1	10/27/14	AMY	n/a	n/a	MSV1307

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

MC34365-3, MC34365-6, MC34365-7

CAS No.	Surrogate Recoveries	MS	MSD	MC34408-1	Limits
1868-53-7	Dibromofluoromethane	95%	94%	102%	70-130%
2037-26-5	Toluene-D8	104%	102%	100%	70-130%
460-00-4	4-Bromofluorobenzene	104%	104%	102%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.
(c) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34464-4MS	V36144.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4MSD	V36145.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4	V36136.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	MC34464-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	59.5	119	50	58.9	118	1	70-130/30
107-02-8	Acrolein	ND		250	215	86	250	290	116	30	70-130/30
107-13-1	Acrylonitrile	ND		50	59.6	119	50	58.4	117	2	70-130/30
71-43-2	Benzene	ND		50	62.6	125	50	59.5	119	5	70-130/30
108-86-1	Bromobenzene	ND		50	54.5	109	50	49.9	100	9	70-130/30
74-97-5	Bromochloromethane	ND		50	55.1	110	50	52.6	105	5	70-130/30
75-27-4	Bromodichloromethane	ND		50	60.1	120	50	57.0	114	5	70-130/30
75-25-2	Bromoform	ND		50	51.0	102	50	47.4	95	7	70-130/30
74-83-9	Bromomethane	ND		50	57.9	116	50	53.9	108	7	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	45.1	90	50	46.5	93	3	70-130/30
104-51-8	n-Butylbenzene	2.0	J	50	55.7	107	50	49.9	96	11	70-130/30
135-98-8	sec-Butylbenzene	ND		50	48.2	96	50	43.8	88	10	70-130/30
98-06-6	tert-Butylbenzene	ND		50	51.3	103	50	46.7	93	9	70-130/30
75-15-0	Carbon disulfide	ND		50	70.3	141* [a]	50	67.9	136* [a]	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	48.0	96	50	42.3	85	13	70-130/30
108-90-7	Chlorobenzene	ND		50	55.0	110	50	53.1	106	4	70-130/30
75-00-3	Chloroethane	ND		50	63.8	128	50	59.8	120	6	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* [a]	50	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		50	54.4	109	50	51.3	103	6	70-130/30
74-87-3	Chloromethane	ND		50	73.8	148* [a]	50	71.2	142* [a]	4	70-130/30
95-49-8	o-Chlorotoluene	ND		50	58.6	117	50	53.6	107	9	70-130/30
106-43-4	p-Chlorotoluene	ND		50	58.3	117	50	52.7	105	10	70-130/30
124-48-1	Dibromochloromethane	ND		50	52.7	105	50	51.2	102	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	55.2	110	50	50.0	100	10	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	54.7	109	50	54.3	109	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	53.4	107	50	54.4	109	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	53.5	107	50	48.7	97	9	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	55.7	111	50	53.0	106	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	57.2	114	50	53.7	107	6	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	66.5	133* [a]	50	64.8	130	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	58.6	117	50	55.7	111	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	62.6	125	50	58.4	117	7	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	63.9	128	50	61.2	122	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	58.5	117	50	57.5	115	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	68.3	137* [a]	50	63.7	127	7	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	65.0	130	50	61.6	123	5	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34464-4MS	V36144.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4MSD	V36145.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4	V36136.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Compound	MC34464-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	59.6	119	50	58.0	116	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	61.8	124	50	58.1	116	6	70-130/30
123-91-1	1,4-Dioxane	ND		125	128	102	125	185	148* b	36* c	70-130/30
97-63-2	Ethyl methacrylate	ND		50	50.8	102	50	49.6	99	2	72-139/30
100-41-4	Ethylbenzene	ND		50	60.3	121	50	58.1	116	4	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	51.6	103	50	47.6	95	8	70-130/30
591-78-6	2-Hexanone	ND		50	41.8	84	50	42.4	85	1	70-130/30
98-82-8	Isopropylbenzene	3.1	J	50	49.1	92	50	45.3	84	8	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	47.0	94	50	44.6	89	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	45.3	91	50	45.4	91	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	52.5	105	50	51.2	102	3	70-130/30
74-95-3	Methylene bromide	ND		50	59.3	119	50	56.6	113	5	70-130/30
75-09-2	Methylene chloride	ND		50	58.8	118	50	56.3	113	4	70-130/30
91-20-3	Naphthalene	ND		50	50.3	101	50	53.7	107	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	50.4	101	50	45.6	91	10	70-130/30
100-42-5	Styrene	ND		50	61.8	124	50	56.8	114	8	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	55.5	111	50	53.6	107	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	67.9	136* b	50	61.5	123	10	70-130/30
127-18-4	Tetrachloroethene	ND		50	50.9	102	50	49.6	99	3	70-130/30
108-88-3	Toluene	ND		50	59.4	119	50	56.0	112	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	47.6	95	50	47.9	96	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	48.2	96	50	46.0	92	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	55.8	112	50	51.4	103	8	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	63.4	127	50	60.9	122	4	70-130/30
79-01-6	Trichloroethene	ND		50	50.9	102	50	48.5	97	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	52.1	104	50	45.7	91	13	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	43.4	87	50	38.7	77	11	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.5	105	50	47.3	95	10	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	50.1	100	50	45.3	91	10	70-130/30
108-05-4	Vinyl Acetate	ND		50	62.8	126	50	60.9	122	3	70-130/30
75-01-4	Vinyl chloride	ND		50	69.2	138* a	50	63.9	128	8	70-130/30
	m,p-Xylene	ND		100	120	120	100	117	117	3	70-130/30
95-47-6	o-Xylene	ND		50	53.1	106	50	50.1	100	6	70-130/30
1330-20-7	Xylene (total)	ND		150	173	115	150	167	111	4	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34464-4MS	V36144.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4MSD	V36145.D	1	10/29/14	AMY	n/a	n/a	MSV1310
MC34464-4	V36136.D	1	10/29/14	AMY	n/a	n/a	MSV1310

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

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5

CAS No.	Surrogate Recoveries	MS	MSD	MC34464-4	Limits
1868-53-7	Dibromofluoromethane	99%	98%	103%	70-130%
2037-26-5	Toluene-D8	106%	103%	85%	70-130%
460-00-4	4-Bromofluorobenzene	102%	97%	102%	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.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34509-2MS	V36146.D	5	10/29/14	AMY	n/a	n/a	MSV1308
MC34509-2MSD	V36147.D	5	10/29/14	AMY	n/a	n/a	MSV1308
MC34509-2	V36083.D	1	10/28/14	AMY	n/a	n/a	MSV1308

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

MC34365-1, MC34365-2, MC34365-5, MC34365-6

CAS No.	Compound	MC34509-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	321	128	250	326	130	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC34509-2	Limits
1868-53-7	Dibromofluoromethane	98%	99%	103%	70-130%
2037-26-5	Toluene-D8	102%	102%	99%	70-130%
460-00-4	4-Bromofluorobenzene	94%	90%	103%	70-130%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV1307-CC1296	Injection Date:	10/27/14
Lab File ID:	V36042.D	Injection Time:	17:14
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	927444	6.57	1512567	7.75	664914	11.08	802240	13.29	108431	3.54
Upper Limit [a]	1854888	7.07	3025134	8.25	1329828	11.58	1604480	13.79	216862	4.04
Lower Limit [b]	463722	6.07	756284	7.25	332457	10.58	401120	12.79	54216	3.04
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1307-BS	883535	6.56	1419232	7.75	665944	11.08	819282	13.29	108933	3.53
MSV1307-MB	817314	6.56	1341485	7.75	623292	11.08	750518	13.29	86964	3.53
MC34365-7	801082	6.56	1327564	7.75	618110	11.08	729719	13.29	81232	3.54
ZZZZZZ	756798	6.56	1204566	7.74	560446	11.08	697829	13.29	73401	3.53
ZZZZZZ	750634	6.56	1243637	7.74	558290	11.08	689469	13.29	69813	3.53
ZZZZZZ	739447	6.56	1228442	7.74	573303	11.08	705896	13.29	65984	3.52
ZZZZZZ	670196	6.56	1122972	7.74	518181	11.08	623482	13.29	53729[c]	3.53
MC34408-1	669685	6.56	1117415	7.75	536262	11.08	632029	13.29	54134[d]	3.53
ZZZZZZ	647184	6.56	1071584	7.74	506075	11.08	619547	13.29	52328[e]	3.53
ZZZZZZ	728688	6.56	1137640	7.74	536499	11.08	671793	13.29	51764[e]	3.52
MC34408-1MS	781942	6.56	1271230	7.74	618029	11.08	736554	13.29	68237	3.53
MC34408-1MSD	830289	6.56	1348512	7.74	631878	11.08	738067	13.29	70243	3.52
ZZZZZZ	725710	6.56	1193619	7.74	555531	11.08	680747	13.29	62140	3.52
ZZZZZZ	777372	6.56	1254674	7.74	562528	11.08	689499	13.29	60979	3.53
ZZZZZZ	744547	6.56	1232195	7.74	619462	11.08	740421	13.29	64047	3.53
ZZZZZZ	754945	6.56	1243238	7.74	577310	11.08	687502	13.29	57678	3.53
ZZZZZZ	738864	6.56	1189752	7.74	539024	11.08	654157	13.29	55000	3.53
MC34365-3	654309	6.56	1090634	7.74	486925	11.08	588041	13.29	50360[c]	3.52
MC34365-6	620486	6.56	1043781	7.74	490095	11.08	566633	13.29	46754[c]	3.52

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) Outside control limits. Target analytes not associated with this internal standard.
(d) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.
(e) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV1308-CC1296	Injection Date:	10/28/14
Lab File ID:	V36073.D	Injection Time:	06:56
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	684373	6.55	1083041	7.74	539995	11.08	662902	13.29	63448	3.52
Upper Limit [a]	1368746	7.05	2166082	8.24	1079990	11.58	1325804	13.79	126896	4.02
Lower Limit [b]	342187	6.05	541521	7.24	269998	10.58	331451	12.79	31724	3.02
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1308-BS	707610	6.55	1127998	7.74	562695	11.08	681952	13.29	68545	3.52
MSV1308-MB	629924	6.56	1041720	7.74	484567	11.08	581151	13.29	57676	3.53
ZZZZZZ	681939	6.56	1072562	7.74	497308	11.08	604723	13.29	69094	3.52
MC34365-1	638458	6.56	1043867	7.74	511048	11.08	611731	13.29	70534	3.53
MC34509-2	630289	6.56	1047226	7.74	500284	11.08	581780	13.29	68315	3.53
ZZZZZZ	679535	6.56	1080713	7.74	520605	11.08	626860	13.29	89524	3.53
MC34365-2	629057	6.56	1058065	7.75	487918	11.08	593768	13.29	79195	3.53
MC34365-5	608734	6.56	1023539	7.75	464547	11.08	566200	13.29	73498	3.53
MC34365-6	576223	6.56	990514	7.74	449651	11.08	538324	13.29	72276	3.52
ZZZZZZ	557395	6.57	953734	7.75	469279	11.08	548206	13.29	75363	3.53
ZZZZZZ	573028	6.56	945159	7.75	497105	11.08	612465	13.29	63415	3.53

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.

6.4.2

Volatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV1310-CC1296	Injection Date:	10/29/14
Lab File ID:	V36130.D	Injection Time:	10:25
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	793408	6.57	1277328	7.75	598025	11.09	690070	13.30	77633	3.53
Upper Limit [a]	1586816	7.07	2554656	8.25	1196050	11.59	1380140	13.80	155266	4.03
Lower Limit [b]	396704	6.07	638664	7.25	299013	10.59	345035	12.80	38817	3.03
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1310-BS	815399	6.57	1315328	7.75	612219	11.09	713639	13.30	88219	3.53
MSV1308-BS1	815399	6.57	1315328	7.75	612219	11.09	713639	13.30	88219	3.53
MSV1310-MB	718536	6.58	1193581	7.76	543899	11.09	626008	13.30	83829	3.54
MSV1308-MB1	718536	6.58	1193581	7.76	543899	11.09	626008	13.30	83829	3.54
ZZZZZZ	737875	6.58	1179841	7.76	534343	11.09	639632	13.30	73411	3.56
MC34464-4	682369	6.58	1218737	7.76	536698	11.09	575048	13.30	63386	3.54
MC34365-4	615437	6.58	1015532	7.76	483617	11.09	550712	13.30	56766	3.54
ZZZZZZ	641272	6.58	1114901	7.76	495092	11.09	560010	13.30	65715	3.54
ZZZZZZ	577832	6.58	962934	7.76	457001	11.09	554135	13.30	69761	3.55
MC34365-1	590940	6.58	1009963	7.76	448650	11.09	517841	13.30	51598	3.53
MC34365-2	594139	6.58	1038605	7.76	441718	11.09	515395	13.30	49685	3.54
MC34365-3	557282	6.58	937872	7.76	443126	11.09	515762	13.30	60851	3.54
MC34365-5	580917	6.58	1060154	7.76	485375	11.09	532838	13.30	61204	3.54
MC34464-4MS	629995	6.57	997886	7.75	504909	11.09	608897	13.30	67737	3.53
MC34464-4MSD	716108	6.58	1153399	7.76	560437	11.09	702119	13.30	80810	3.54
MC34509-2MS	721366	6.57	1156430	7.75	544531	11.09	710932	13.30	77331	3.53
MC34509-2MSD	732517	6.57	1124553	7.75	548094	11.09	754555	13.30	87252	3.54
ZZZZZZ	708843	6.57	1131117	7.75	526649	11.09	618697	13.30	80754	3.54
ZZZZZZ	745410	6.57	1190734	7.75	588892	11.09	669607	13.30	99418	3.53
ZZZZZZ	681705	6.58	1140151	7.76	511868	11.09	582255	13.30	69420	3.54
ZZZZZZ	633446	6.57	1038874	7.75	462019	11.09	561146	13.30	72426	3.54
ZZZZZZ	630465	6.58	1023726	7.76	482869	11.09	540027	13.30	64884	3.54
ZZZZZZ	600991	6.57	995131	7.75	460703	11.09	576762	13.30	55302	3.53
ZZZZZZ	588402	6.57	958564	7.75	429605	11.09	530688	13.30	52288	3.54

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.

6.4.3

Volatile Surrogate Recovery Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34365-1	V36082.D	103	99	101
MC34365-1	V36140.D	107	96	103
MC34365-2	V36141.D	108	93	103
MC34365-2	V36085.D	104	97	101
MC34365-3	V36066.D	99	96	100
MC34365-3	V36142.D	111	97	103
MC34365-4	V36137.D	102	100	106
MC34365-5	V36086.D	106	95	102
MC34365-5	V36143.D	111	98	107
MC34365-6	V36068.D	99	98	102
MC34365-6	V36087.D	107	95	103
MC34365-7	V36048.D	96	98	102
MC34408-1MS	V36056.D	95	104	104
MC34408-1MSD	V36057.D	94	102	104
MC34464-4MS	V36144.D	99	106	102
MC34464-4MSD	V36145.D	98	103	97
MC34509-2MS	V36146.D	98	102	94
MC34509-2MSD	V36147.D	99	102	90
MSV1307-BS	V36043.D	94	102	101
MSV1307-MB	V36047.D	95	99	101
MSV1308-BS	V36074.D	98	104	102
MSV1308-MB	V36078.D	103	97	102
MSV1308-MB1	V36134.D	102	99	105
MSV1310-BS	V36131.D	96	101	105
MSV1310-MB	V36134.D	102	99	105

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

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-MB	R40407.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1

7

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-MB	R40407.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	96%	15-110%
4165-60-0	Nitrobenzene-d5	77%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	100%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
57-10-3	n-Hexadecanoic acid	8.53	4.6	ug/l	JN
107-52-8	Hexasiloxane, tetradecamethyl-	10.13	13	ug/l	JN
556-71-8	Cyclononasiloxane, octadecamethyl-	11.42	13	ug/l	JN
	Total TIC, Semi-Volatile		30.6	ug/l	J

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40243-MB	I92302.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	91%	30-130%

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-BS	R40408.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.8	44	30-130
95-57-8	2-Chlorophenol	50	43.2	86	30-130
59-50-7	4-Chloro-3-methyl phenol	50	45.6	91	30-130
120-83-2	2,4-Dichlorophenol	50	48.4	97	30-130
105-67-9	2,4-Dimethylphenol	50	36.8	74	30-130
51-28-5	2,4-Dinitrophenol	50	56.7	113	30-130
534-52-1	4,6-Dinitro-o-cresol	50	56.9	114	30-130
95-48-7	2-Methylphenol	50	36.4	73	30-130
	3&4-Methylphenol	100	71.6	72	30-130
88-75-5	2-Nitrophenol	50	48.4	97	30-130
100-02-7	4-Nitrophenol	50	24.2	48	30-130
87-86-5	Pentachlorophenol	50	49.1	98	30-130
108-95-2	Phenol	50	20.1	40	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.1	100	30-130
88-06-2	2,4,6-Trichlorophenol	50	51.3	103	30-130
62-53-3	Aniline	50	31.0	62	40-140
101-55-3	4-Bromophenyl phenyl ether	50	58.3	117	40-140
85-68-7	Butyl benzyl phthalate	50	54.9	110	40-140
100-51-6	Benzyl Alcohol	50	41.6	83	40-140
91-58-7	2-Chloronaphthalene	50	51.8	104	40-140
106-47-8	4-Chloroaniline	50	46.7	93	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	48.7	97	40-140
111-44-4	bis(2-Chloroethyl)ether	50	36.9	74	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	68.8	138	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	53.1	106	40-140
122-66-7	1,2-Diphenylhydrazine	50	52.3	105	40-140
121-14-2	2,4-Dinitrotoluene	50	55.8	112	40-140
606-20-2	2,6-Dinitrotoluene	50	53.5	107	40-140
91-94-1	3,3'-Dichlorobenzidine	50	54.0	108	40-140
132-64-9	Dibenzofuran	50	49.7	99	40-140
84-74-2	Di-n-butyl phthalate	50	53.7	107	40-140
117-84-0	Di-n-octyl phthalate	50	56.7	113	40-140
84-66-2	Diethyl phthalate	50	53.2	106	40-140
131-11-3	Dimethyl phthalate	50	52.8	106	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	55.0	110	40-140
118-74-1	Hexachlorobenzene	50	60.3	121	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-BS	R40408.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	24.0	48	40-140
67-72-1	Hexachloroethane	50	34.9	70	40-140
78-59-1	Isophorone	50	44.5	89	40-140
88-74-4	2-Nitroaniline	50	51.4	103	40-140
99-09-2	3-Nitroaniline	50	48.6	97	40-140
100-01-6	4-Nitroaniline	50	48.5	97	40-140
98-95-3	Nitrobenzene	50	48.6	97	40-140
62-75-9	n-Nitrosodimethylamine	50	30.4	61	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	48.2	96	40-140
86-30-6	N-Nitrosodiphenylamine	50	48.9	98	40-140
110-86-1	Pyridine	50	27.2	54	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	52%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	102%	15-110%
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	81%	30-130%
1718-51-0	Terphenyl-d14	98%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40243-BS	I92303.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	48.7	97	40-140
208-96-8	Acenaphthylene	50	42.6	85	40-140
120-12-7	Anthracene	50	49.6	99	40-140
56-55-3	Benzo(a)anthracene	50	58.3	117	40-140
50-32-8	Benzo(a)pyrene	50	54.4	109	40-140
205-99-2	Benzo(b)fluoranthene	50	55.7	111	40-140
191-24-2	Benzo(g,h,i)perylene	50	56.1	112	40-140
207-08-9	Benzo(k)fluoranthene	50	54.9	110	40-140
218-01-9	Chrysene	50	54.3	109	40-140
53-70-3	Dibenzo(a,h)anthracene	50	56.5	113	40-140
206-44-0	Fluoranthene	50	51.3	103	40-140
86-73-7	Fluorene	50	53.0	106	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	55.5	111	40-140
90-12-0	1-Methylnaphthalene	50	43.3	87	40-140
91-57-6	2-Methylnaphthalene	50	43.8	88	40-140
85-01-8	Phenanthrene	50	51.9	104	40-140
129-00-0	Pyrene	50	49.7	99	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	91%	30-130%
321-60-8	2-Fluorobiphenyl	80%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

7.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-MS	R40409.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
OP40242-MSD	R40410.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
MC34100-1	R40411.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

7.3.1

7

CAS No.	Compound	MC34100-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	22.0	44	50	23.0	46	4	30-130/20
95-57-8	2-Chlorophenol	ND		50	43.3	87	50	42.9	86	1	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	46.1	92	50	44.7	89	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	49.1	98	50	48.2	96	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	38.7	77	50	29.6	59	27* a	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	57.4	115	50	56.9	114	1	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	56.7	113	50	55.8	112	2	30-130/20
95-48-7	2-Methylphenol	ND		50	36.8	74	50	35.9	72	2	30-130/20
	3&4-Methylphenol	ND		100	71.2	71	100	70.7	71	1	30-130/20
88-75-5	2-Nitrophenol	ND		50	48.4	97	50	48.1	96	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	24.2	48	50	24.3	49	0	30-130/20
87-86-5	Pentachlorophenol	ND		50	47.9	96	50	47.5	95	1	30-130/20
108-95-2	Phenol	ND		50	20.1	40	50	20.6	41	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	50.5	101	50	49.4	99	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	50.6	101	50	50.3	101	1	30-130/20
62-53-3	Aniline	ND		50	30.9	62	50	20.6	41	40* a	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	57.3	115	50	56.7	113	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	53.5	107	50	53.7	107	0	40-140/20
100-51-6	Benzyl Alcohol	ND		50	41.2	82	50	42.2	84	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	51.5	103	50	52.0	104	1	40-140/20
106-47-8	4-Chloroaniline	ND		50	47.2	94	50	42.4	85	11	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	49.0	98	50	48.4	97	1	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	37.1	74	50	36.6	73	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	67.5	135	50	66.4	133	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	52.5	105	50	52.8	106	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	51.1	102	50	50.5	101	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	56.3	113	50	55.7	111	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	53.6	107	50	52.3	105	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	54.2	108	50	48.9	98	10	40-140/20
132-64-9	Dibenzofuran	ND		50	49.2	98	50	49.2	98	0	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	52.5	105	50	52.4	105	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	55.5	111	50	56.4	113	2	40-140/20
84-66-2	Diethyl phthalate	ND		50	53.2	106	50	52.7	105	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	52.4	105	50	51.7	103	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	54.0	108	50	54.9	110	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	59.2	118	50	59.4	119	0	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40242-MS	R40409.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
OP40242-MSD	R40410.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487
MC34100-1	R40411.D	1	10/20/14	KD	10/16/14	OP40242	MSR1487

The QC reported here applies to the following samples: Method: SW846 8270D

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

7.3.1

7

CAS No.	Compound	MC34100-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	23.7	47	50	23.1	46	3	40-140/20
67-72-1	Hexachloroethane	ND		50	33.8	68	50	33.0	66	2	40-140/20
78-59-1	Isophorone	ND		50	45.0	90	50	44.7	89	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	51.9	104	50	51.7	103	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	48.7	97	50	47.2	94	3	40-140/20
100-01-6	4-Nitroaniline	ND		50	48.5	97	50	45.7	91	6	40-140/20
98-95-3	Nitrobenzene	ND		50	48.6	97	50	48.0	96	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	31.5	63	50	31.8	64	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	47.8	96	50	47.4	95	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	48.2	96	50	47.8	96	1	40-140/20
110-86-1	Pyridine	ND		50	27.0	54	50	7.5	15* b	113* a	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-1	Limits
367-12-4	2-Fluorophenol	53%	52%	55%	15-110%
4165-62-2	Phenol-d5	34%	34%	35%	15-110%
118-79-6	2,4,6-Tribromophenol	100%	97%	98%	15-110%
4165-60-0	Nitrobenzene-d5	86%	83%	89%	30-130%
321-60-8	2-Fluorobiphenyl	80%	77%	85%	30-130%
1718-51-0	Terphenyl-d14	95%	94%	105%	30-130%

(a) High RPD due to possible matrix interference and/or sample heterogeneity.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40243-MS	I92304.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440
OP40243-MSD	I92305.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440
MC34100-2	I92306.D	1	10/20/14	WK	10/16/14	OP40243	MSI3440

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6

7.3.2

7

CAS No.	Compound	MC34100-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	48.3	97	50	48.0	96	1	40-140/20
208-96-8	Acenaphthylene	ND		50	42.1	84	50	42.1	84	0	40-140/20
120-12-7	Anthracene	ND		50	50.1	100	50	48.4	97	3	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	57.2	114	50	57.0	114	0	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	53.7	107	50	52.8	106	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	53.4	107	50	54.4	109	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	55.2	110	50	54.3	109	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	48.7	97	50	53.1	106	9	40-140/20
218-01-9	Chrysene	ND		50	53.1	106	50	52.7	105	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	55.5	111	50	54.7	109	1	40-140/20
206-44-0	Fluoranthene	ND		50	50.4	101	50	50.4	101	0	40-140/20
86-73-7	Fluorene	ND		50	52.1	104	50	52.0	104	0	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	54.7	109	50	53.7	107	2	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	42.8	86	50	42.7	85	0	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	42.9	86	50	42.7	85	0	40-140/20
85-01-8	Phenanthrene	ND		50	51.8	104	50	50.6	101	2	40-140/20
129-00-0	Pyrene	ND		50	48.8	98	50	48.8	98	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-2	Limits
4165-60-0	Nitrobenzene-d5	90%	87%	94%	30-130%
321-60-8	2-Fluorobiphenyl	79%	76%	83%	30-130%
1718-51-0	Terphenyl-d14	90%	88%	95%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3440-CC3427	Injection Date:	10/20/14
Lab File ID:	I92301.D	Injection Time:	08:14
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	327019	2.98	725998	4.01	418638	5.50	747713	6.74	618061	9.45	1186129	10.83
Upper Limit [a]	654038	3.48	1451996	4.51	837276	6.00	1495426	7.24	1236122	9.95	2372258	11.33
Lower Limit [b]	163510	2.48	362999	3.51	209319	5.00	373857	6.24	309031	8.95	593065	10.33
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40243-MB	320529	2.98	709770	4.00	404926	5.50	716500	6.74	603424	9.44	1172310	10.82
OP40243-BS	308324	2.98	687074	4.01	392933	5.50	686935	6.75	573027	9.45	1110430	10.83
OP40243-MS	319622	2.98	723104	4.01	411540	5.50	719692	6.75	609855	9.45	1178122	10.83
OP40243-MSD	319122	2.98	720303	4.01	410355	5.50	719575	6.75	589523	9.45	1140718	10.83
MC34100-2	306639	2.98	683858	4.00	392899	5.50	678161	6.74	573449	9.44	1109769	10.82
ZZZZZZ	311379	2.98	695964	4.00	398153	5.50	697029	6.74	581112	9.44	1134802	10.82
ZZZZZZ	315274	2.98	697463	4.00	404807	5.50	706088	6.74	591429	9.44	1142245	10.82
ZZZZZZ	317292	2.98	712353	4.00	412176	5.50	712797	6.74	605017	9.44	1161383	10.82
ZZZZZZ	310263	2.98	686911	4.00	396987	5.50	687740	6.74	579228	9.44	1115011	10.82
ZZZZZZ	314648	2.98	698841	4.00	405096	5.50	698150	6.74	593845	9.44	1140913	10.82
ZZZZZZ	307587	2.98	684124	4.00	397316	5.50	687368	6.74	588979	9.44	1125856	10.82
ZZZZZZ	310519	2.98	688657	4.00	397519	5.50	686142	6.74	581516	9.44	1118938	10.82
MC34365-1	308491	2.98	691851	4.00	396181	5.50	695756	6.74	587364	9.44	1132763	10.82
ZZZZZZ	292677	2.98	660026	4.00	380400	5.50	664545	6.74	562979	9.44	1076578	10.82
MC34365-2	315448	2.98	705699	4.00	398758	5.50	703898	6.74	590913	9.45	1136258	10.82

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3441-CC3427	Injection Date:	10/20/14
Lab File ID:	I92322.D	Injection Time:	15:50
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	281761	2.94	639703	3.97	375933	5.45	677590	6.70	593211	9.40	1131892	10.77
Upper Limit [a]	563522	3.44	1279406	4.47	751866	5.95	1355180	7.20	1186422	9.90	2263784	11.27
Lower Limit [b]	140881	2.44	319852	3.47	187967	4.95	338795	6.20	296606	8.90	565946	10.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC34365-3	276031	2.95	627832	3.97	376796	5.46	636394	6.70	560699	9.40	1069934	10.77
MC34365-4	277649	2.94	623186	3.96	364022	5.45	640575	6.70	577406	9.40	1109585	10.77
MC34365-5	278694	2.94	631754	3.96	364727	5.45	650295	6.70	574856	9.39	1107518	10.77
MC34365-6	264331	2.94	597792	3.96	349488	5.45	622012	6.70	557139	9.39	1078296	10.77
OP40262-MB	306274	2.94	682781	3.96	400097	5.45	710869	6.70	637419	9.39	1226495	10.77
OP40262-BS	317486	2.94	728268	3.97	421075	5.46	757178	6.70	653292	9.40	1223807	10.78
OP40262-MS	302428	2.94	688625	3.97	399135	5.45	715764	6.70	617500	9.40	1168952	10.78
OP40262-MSD	294746	2.94	676754	3.97	391692	5.45	701042	6.70	614602	9.40	1169749	10.78
MC34440-1A	313799	2.94	699880	3.96	409340	5.45	719135	6.70	646134	9.39	1234114	10.77
ZZZZZZ	300009	2.94	676770	3.96	390342	5.45	690848	6.70	616044	9.39	1184846	10.77
ZZZZZZ	290321	2.94	655238	3.96	381708	5.45	667934	6.70	599876	9.39	1159654	10.77
ZZZZZZ	297317	2.94	672874	3.96	389834	5.45	695693	6.70	622540	9.39	1199836	10.77
ZZZZZZ	315734	2.94	714545	3.96	417236	5.45	738066	6.70	660034	9.39	1256894	10.77
ZZZZZZ	307104	2.94	689438	3.96	404043	5.45	711890	6.70	639477	9.39	1229965	10.77
ZZZZZZ	308214	2.94	695349	3.96	405537	5.45	724663	6.70	661151	9.39	1237275	10.77
ZZZZZZ	303656	2.94	690590	3.96	403630	5.45	715211	6.70	643596	9.39	1220585	10.77
ZZZZZZ	297120	2.94	668948	3.96	387209	5.45	687951	6.70	616142	9.39	1174691	10.77
ZZZZZZ	287280	2.94	647380	3.96	377971	5.45	663525	6.70	590463	9.39	1124731	10.77
ZZZZZZ	297173	2.94	671185	3.96	385455	5.45	678504	6.70	632021	9.41	1188310	10.78

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1487-CC1481	Injection Date:	10/20/14
Lab File ID:	R40392.D	Injection Time:	09:47
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	336121	4.07	1204764	5.17	724665	6.68	1207568	7.95	1246765	10.23	1085526	11.64
Upper Limit [a]	672242	4.57	2409528	5.67	1449330	7.18	2415136	8.45	2493530	10.73	2171052	12.14
Lower Limit [b]	168061	3.57	602382	4.67	362333	6.18	603784	7.45	623383	9.73	542763	11.14
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40231-MB	352941	4.06	1271176	5.17	767738	6.67	1323103	7.94	1347573	10.22	1296360	11.63
OP40231-BS	327483	4.07	1186562	5.17	714494	6.67	1228616	7.94	1293944	10.23	1157802	11.64
OP40231-MS	336568	4.07	1212461	5.17	732482	6.67	1245109	7.94	1303358	10.23	1163618	11.64
OP40231-MSD	375839	4.07	1348574	5.17	809657	6.67	1373225	7.94	1447284	10.23	1271425	11.64
MC34000-22	351707	4.06	1267241	5.17	762171	6.67	1328509	7.94	1347307	10.22	1291928	11.63
ZZZZZZ	370932	4.06	1325361	5.17	800907	6.67	1393040	7.94	1390172	10.22	1319667	11.63
ZZZZZZ	337982	4.06	1209393	5.17	731102	6.67	1252674	7.94	1282256	10.22	1221885	11.63
ZZZZZZ	368483	4.06	1329526	5.17	809935	6.67	1398317	7.94	1392311	10.22	1331945	11.63
ZZZZZZ	383271	4.07	1403813	5.17	858707	6.67	1354685	7.94	1452837	10.22	1394073	11.63
ZZZZZZ	394518	4.07	1408788	5.17	849561	6.67	1463246	7.94	1438510	10.22	1320985	11.63
ZZZZZZ	404389	4.06	1455717	5.17	879455	6.67	1491851	7.94	1508743	10.22	1405966	11.63
ZZZZZZ	392128	4.07	1401768	5.17	796201	6.68	1363113	7.94	1389687	10.22	1326502	11.63
ZZZZZZ	396183	4.07	1427101	5.17	1253697	6.68	1396635	7.94	1456213	10.22	1367947	11.63
ZZZZZZ	366222	4.07	1307437	5.17	1227675	6.68	1305161	7.94	1355066	10.22	1293918	11.63
OP40242-MB	338068	4.06	1221057	5.17	729916	6.67	1264711	7.93	1290529	10.22	1227242	11.63
OP40242-BS	343417	4.07	1235090	5.17	739075	6.67	1229729	7.94	1288378	10.23	1142571	11.63
OP40242-MS	358417	4.07	1271975	5.17	768096	6.67	1297638	7.94	1372126	10.23	1218572	11.63
OP40242-MSD	364345	4.07	1301853	5.17	783897	6.67	1322333	7.94	1370567	10.23	1196731	11.63
MC34100-1	346145	4.06	1251666	5.17	756419	6.67	1291896	7.93	1276322	10.22	1190287	11.63
ZZZZZZ	356319	4.06	1269704	5.17	761862	6.67	1313877	7.93	1286069	10.22	1184761	11.63
ZZZZZZ	367877	4.06	1316024	5.17	797324	6.67	1371394	7.93	1350126	10.22	1244117	11.63
MC34365-1	331004	4.07	1182535	5.17	711423	6.67	1218131	7.93	1198694	10.22	1117662	11.63
MC34365-2 [c]	338288	4.07	1219625	5.17	733754	6.67	1253735	7.93	1212859	10.22	1138053	11.63
MC34365-3	319384	4.07	1158691	5.17	729774	6.67	1129224	7.94	1168688	10.22	1098321	11.63
MC34365-4	355514	4.06	1264985	5.17	771256	6.67	1311075	7.93	1249534	10.22	1133437	11.63
MC34365-5	349712	4.06	1246710	5.17	761029	6.67	1303718	7.93	1253860	10.22	1160321	11.63
MC34365-6	364605	4.07	1308436	5.17	785818	6.67	1354386	7.93	1302994	10.22	1220026	11.63

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1487-CC1481	Injection Date:	10/20/14
Lab File ID:	R40392.D	Injection Time:	09:47
Instrument ID:	GCMSR	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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) Confirmation run for surrogate recoveries.

7.4.3

7

Semivolatile Internal Standard Area Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1489-CC1481	Injection Date:	10/22/14
Lab File ID:	R40450.D	Injection Time:	08:11
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	330023	3.98	1186361	5.09	727269	6.59	1244070	7.86	1309365	10.13	1192270	11.51
Upper Limit [a]	660046	4.48	2372722	5.59	1454538	7.09	2488140	8.36	2618730	10.63	2384540	12.01
Lower Limit [b]	165012	3.48	593181	4.59	363635	6.09	622035	7.36	654683	9.63	596135	11.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40290-MB	392049	3.98	1407408	5.08	843673	6.58	1442973	7.85	1463051	10.12	1344824	11.50
OP40237-MB	443415	3.98	1585366	5.08	952620	6.58	1614293	7.85	1592143	10.12	1492009	11.50
OP40290-BS	445698	3.98	1586069	5.09	952350	6.59	1618029	7.86	1647665	10.13	1479180	11.51
OP40290-MS	438402	3.98	1556486	5.09	893200	6.59	1404272	7.87	1070347	10.18	1414271	11.57
OP40290-MSD	421073	3.98	1511982	5.09	872202	6.59	1401410	7.87	1107347	10.17	1362125	11.57
MC34381-11	371923	3.98	1361704	5.09	810109	6.59	1091367	7.87	871400	10.18	1082232	11.60
ZZZZZZZ	397227	3.98	1393946	5.09	825459	6.59	1387159	7.86	1009366	10.16	999717	11.58
ZZZZZZZ	296974	3.99	1067365	5.09	607293	6.59	1021446	7.87	883349	10.18	916253	11.60
ZZZZZZZ	249302	3.99	892321	5.09	529268	6.59	883627	7.86	858531	10.15	847706	11.55
ZZZZZZZ	253603	3.99	887877	5.09	523730	6.59	854037	7.87	689238	10.22	871149	11.66
ZZZZZZZ	270155	3.99	952577	5.09	563183	6.60	937269	7.86	898984	10.15	910426	11.57
MC34365-2	249765	3.99	889290	5.10	534420	6.60	915583	7.87	926492	10.14	922527	11.54
OP40297-MB	242972	3.99	872973	5.09	537693	6.60	947882	7.86	985888	10.14	967846	11.53
OP40297-LB	242972	3.99	872973	5.09	537693	6.60	947882	7.86	985888	10.14	967846	11.53
OP40297-BS	257401	3.99	920963	5.10	548347	6.60	941387	7.87	930531	10.14	902966	11.53
ZZZZZZZ	279484	3.99	986197	5.09	592118	6.59	1013067	7.86	990374	10.13	964790	11.53
ZZZZZZZ	269188	3.98	969560	5.09	598923	6.59	1025238	7.86	1049977	10.13	1013693	11.52
ZZZZZZZ	313840	3.99	1096856	5.09	655863	6.59	1113925	7.86	1144516	10.13	1089360	11.52
ZZZZZZZ	274787	3.98	855559	5.09	528563	6.59	1042291	7.86	969130	10.14	934169	11.53

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.4

Semivolatile Surrogate Recovery Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34365-1	R40414.D	38	25	91	66	64	93
MC34365-2	R40462.D	19	13* [a]	53	30	36	49
MC34365-2	R40415.D	20	14* [a]	52	34	35	51
MC34365-3	R40416.D	53	33	109	88	85	101
MC34365-4	R40417.D	53	34	102	89	84	104
MC34365-5	R40418.D	48	31	97	80	76	102
MC34365-6	R40419.D	53	33	98	86	79	99
OP40242-BS	R40408.D	52	34	102	86	81	98
OP40242-MB	R40407.D	46	30	96	77	78	100
OP40242-MS	R40409.D	53	34	100	86	80	95
OP40242-MSD	R40410.D	52	34	97	83	77	94

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis. Insufficient sample volume for re-extraction.

7.5.1

7

Semivolatile Surrogate Recovery Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34365-1	I92314.D	68	63	87
MC34365-2	I92316.D	68	66	84
MC34365-3	I92323.D	91	80	91
MC34365-4	I92324.D	92	81	92
MC34365-5	I92325.D	83	75	88
MC34365-6	I92326.D	90	76	88
OP40243-BS	I92303.D	91	80	92
OP40243-MB	I92302.D	82	78	91
OP40243-MS	I92304.D	90	79	90
OP40243-MSD	I92305.D	87	76	88

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MB	BB60044.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6, MC34365-8

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	69%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-BS	BB60045.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6, MC34365-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.075	106	60-140
106-93-4	1,2-Dibromoethane	0.071	0.076	107	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	75%	36-173%
460-00-4	Bromofluorobenzene (S)	77%	36-173%

* = Outside of Control Limits.

8.2.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MS	BB60046.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
OP40305-MSD	BB60047.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
MC34100-13	BB60048.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34365-1, MC34365-2, MC34365-3, MC34365-4, MC34365-5, MC34365-6, MC34365-8

CAS No.	Compound	MC34100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.075	106	9	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.075	106	0.071	0.077	108	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-13 Limits	
460-00-4	Bromofluorobenzene (S)	83%	73%	71%	36-173%
460-00-4	Bromofluorobenzene (S)	87%	74%	74%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34365-1	BB60049.D	71	88
MC34365-2	BB60050.D	70	89
MC34365-3	BB60051.D	71	83
MC34365-4	BB60052.D	64	73
MC34365-5	BB60053.D	61	74
MC34365-6	BB60055.D	76	91
MC34365-8	BB60056.D	69	76
OP40305-BS	BB60045.D	75	77
OP40305-MB	BB60044.D	69	71
OP40305-MS	BB60046.D	83	87
OP40305-MSD	BB60047.D	73	74

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-ICC3339	Injection Date:	10/23/14
Lab File ID:	BB60040.D	Injection Time:	14:08
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40305-MB	BB60044.D	10/23/14	15:39	3.32	3.33
OP40306-MB	BB60044A.D	10/23/14	15:39	3.32	3.33
OP40306-BS	BB60045A.D	10/23/14	15:57	3.32	3.33
OP40305-BS	BB60045.D	10/23/14	15:57	3.32	3.33
OP40305-MS	BB60046.D	10/23/14	16:15	3.33	3.33
OP40305-MSD	BB60047.D	10/23/14	16:33	3.32	3.33
MC34100-13	BB60048.D	10/23/14	16:51	3.32	3.33
MC34365-1	BB60049.D	10/23/14	17:09	3.32	3.33
MC34365-2	BB60050.D	10/23/14	17:27	3.32	3.33
MC34365-3	BB60051.D	10/23/14	17:45	3.33	3.33
MC34365-4	BB60052.D	10/23/14	18:03	3.32	3.33
MC34365-5	BB60053.D	10/23/14	18:21	3.33	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC34365
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-CC3339	Injection Date:	10/23/14
Lab File ID:	BB60054.D	Injection Time:	18:38
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34365-6	BB60055.D	10/23/14	18:56	3.32	3.33
MC34365-8	BB60056.D	10/23/14	19:14	3.32	3.33
ZZZZZZ	BB60057.D	10/23/14	19:32	3.32	3.33
ZZZZZZ	BB60058.D	10/23/14	19:50	3.32	3.33
ZZZZZZ	BB60059.D	10/23/14	20:08	3.32	3.33
ZZZZZZ	BB60060.D	10/23/14	20:26	3.32	3.33
ZZZZZZ	BB60061.D	10/23/14	20:44	3.33	3.33
ZZZZZZ	BB60062.D	10/23/14	21:02	3.33	3.34
ZZZZZZ	BB60063.D	10/23/14	21:19	3.33	3.33
ZZZZZZ	BB60064.D	10/23/14	21:37	3.32	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

8

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34459

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/14/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
TB-ROX-101714-HCL	TB-ROX-101714-ST
P114-ROX-101714	T12-ROX-101714

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. The VOC surrogate 4-bromofluorobenzene was outside evaluation criteria for sample P114-ROX-101714. Sample T12-ROX-101714 was diluted due to high levels of VOCs. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for 4-chloroaniline, 1,2,4-trichlorobenzene and 1,2,3-trichlorobenzene exceeded 30 percent difference (%D). Also, the continuing calibration verification for 1,2,3-trichlorobenzene exceeded 40%D. Lastly, the continuing calibration check for 1,2-dibromoethane, 4-bromofluorobenzene, and 1,2-dibromo-3-chloropropane exceeded criteria, biased high.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.7ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSP2649-BS	VOCs	2-Chloroethyl vinyl ether	**133**	70-130
MSP2649-BS	VOCs	Chloromethane	**139**	70-130
MSP2649-BS	VOCs	2,2-Dichloropropane	**135**	70-130
MSP2649-BS	VOCs	Naphthalene	**134**	70-130
MSP2649-BS	VOCs	1,2,3-Trichlorobenzene	**62**	70-130
MSP2649-BS	VOCs	Vinyl acetate	**69**	70-130
OP40299-BS	SVOCs	4-Nitrophenol	**28**	30-130
OP40299-BS	SVOCs	Pyridine	**28**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSP2649-BS was associated with the trip blank. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P114-ROX-101714	VOCs	1,2,3-Trichlorobenzene	**UJ**
P114-ROX-101714	VOCs	Vinyl acetate	**UJ**
T12-ROX-101714	VOCs	Naphthalene	**J**
T12-ROX-101714	VOCs	1,2,3-Trichlorobenzene	**UJ**
T12-ROX-101714	VOCs	Vinyl acetate	**UJ**
P114-ROX-101714	SVOCs	4-Nitrophenol	**UJ**
P114-ROX-101714	SVOCs	Pyridine	**UJ**
T12-ROX-101714	SVOCs	4-Nitrophenol	**UJ**
T12-ROX-101714	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P114-ROX-101714 Run#1	VOCs	4-Bromofluorobenzene	**179**	70-130
P114-ROX-101714 Run#2	VOCs	4-Bromofluorobenzene	**186**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
P114-ROX-101714	VOCs	All detects	**J**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

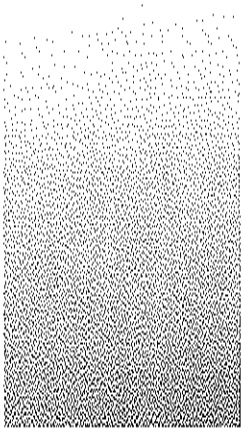
12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

11/10/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34459

Sampling Date: 10/17/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **73**

Reviewed on 11/14/2014

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 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 (G801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34459

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34459-1	10/17/14	00:00	SVMM	10/18/14	AQ	Trip Blank Water	TB-ROX-101714 HCL
MC34459-2	10/17/14	00:00	SVMM	10/18/14	AQ	Trip Blank Water	TB-ROX-101714 ST
MC34459-3	10/17/14	11:45	SVMM	10/18/14	AQ	Ground Water	P114-ROX-101714
MC34459-4	10/17/14	14:50	SVMM	10/18/14	AQ	Ground Water	T12-ROX-101714

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC34459
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	Report Date	11/4/2014 11:31:38 AM

2 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/17/2014 and were received at Accutest on 10/18/2014 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of MC34459. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ Batch ID: MSP2649

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34461-2MS, MC34461-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSP2634-ICV2633 for 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene exceed 30% Difference (response bias high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 1,2,3-Trichlorobenzene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Chloromethane, Naphthalene, Vinyl Acetate are outside control limits. Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone, Acrolein, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 2-Butanone (MEK), 2-Hexanone, Acetone, Vinyl Acetate, 2,2-Dichloropropane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,2-Dichloropropane are outside control limits for sample MC34461-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration check standard MSP2650-CC2633, file P80993 for 1,2,3-trichlorobenzene exceed 40% Difference. Compound response verified at Reporting Limit.
- MC34459-3 for 4-Bromofluorobenzene: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- Continuing calibration check standard MSP2649-CC2633, file P80993 utilized the same file as MSP2650-CC2633.

Matrix AQ Batch ID: MSP2651

- MC34459-3 for 4-Bromofluorobenzene: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- MC34459-3: Confirmation run for surrogate recoveries.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP40299

- 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.
- Sample(s) MC34100-11MS, MC34100-11MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for 4-Nitrophenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP40299-MS/MSD Recovery(s) for 4-Nitrophenol, Phenol, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for Pyridine are outside control limits for sample OP40299-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.
- Initial calibration verification standard MSF3361-ICV3361 for 4-Chloroaniline exceed 30% Difference. 4-Chloroaniline is within criteria in continuing calibration check standard MSF3374-CC3361.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP40300

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-12MS, MC34100-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Calibration standard MSI3446-ICV3427 not associate with this job.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40305

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-13MS, MC34100-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard GBB3339-CC3339, file BB60065 for 1,2-Dibromoethane (signal #1), 1,2-Dibromo-3-chloropropane (signal #1 and signal #2), exceeds criteria (response bias high). Associated samples are non-detect for this compound.
- Continuing calibration check standard GBB3339-CC3339, file BB60070 for 1,2-Dibromoethane (signal #1), 4-Bromofluorobenzene (signal #1), 1,2-Dibromo-3-chloropropane (signal #1 and signal #2) exceed criteria (response bias high). Associated samples are non-detect for target compounds.
- Continuing calibration check standard GBB3339-CC3339, signal #1, file BB60054 for 1,2-Dibromo-3-chloropropane exceeds criteria. 1,2-Dibromo-3-chloropropane is reported from signal #2.

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(MC34459).

Summary of Hits

Job Number: MC34459
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/17/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34459-1	TB-ROX-101714 HCL					
No hits reported in this sample.						
MC34459-2	TB-ROX-101714 ST					
No hits reported in this sample.						
MC34459-3	P114-ROX-101714					
n-Butylbenzene		5.2 J	5.0	1.1	ug/l	SW846 8260C
Ethylbenzene		0.45 J	1.0	0.25	ug/l	SW846 8260C
Methyl Tert Butyl Ether		9.8	1.0	0.22	ug/l	SW846 8260C
Methylene chloride		0.60 J	2.0	0.39	ug/l	SW846 8260C
n-Propylbenzene		0.87 J	5.0	0.49	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		0.43 J	5.0	0.18	ug/l	SW846 8260C
m,p-Xylene		0.59 J	1.0	0.38	ug/l	SW846 8260C
Xylene (total)		0.59 J	1.0	0.30	ug/l	SW846 8260C
Acenaphthene		0.078 J	0.11	0.078	ug/l	SW846 8270D BY SIM
MC34459-4	T12-ROX-101714					
Benzene		1830	5.0	2.5	ug/l	SW846 8260C
Ethylbenzene		1750	10	2.5	ug/l	SW846 8260C
Isopropylbenzene		45.9 J	50	3.5	ug/l	SW846 8260C
Naphthalene		184 J	50	6.9	ug/l	SW846 8260C
n-Propylbenzene		70.7	50	4.9	ug/l	SW846 8260C
Toluene		722	10	2.2	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		244	50	3.0	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		39.1 J	50	1.8	ug/l	SW846 8260C
m,p-Xylene		2250	10	3.8	ug/l	SW846 8260C
o-Xylene		114	10	3.0	ug/l	SW846 8260C
Xylene (total)		2360	10	3.0	ug/l	SW846 8260C
2-Methylphenol		3.0 J	11	0.25	ug/l	SW846 8270D
3&4-Methylphenol		5.9 J	11	0.52	ug/l	SW846 8270D
Phenol		15.4	5.6	0.34	ug/l	SW846 8270D
Di-n-butyl phthalate		0.61 J	5.6	0.19	ug/l	SW846 8270D
Acenaphthene		0.36	0.11	0.077	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.072 J	0.11	0.055	ug/l	SW846 8270D BY SIM
Fluorene		0.31	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		22.0	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		36.9	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.79	0.056	0.014	ug/l	SW846 8270D BY SIM

New England ACCUTEST LABORATORIES

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TB-ROX-101714 HCL		
Lab Sample ID:	MC34459-1	Date Sampled:	10/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80965.D	1	10/31/14	JM	n/a	n/a	MSP2649
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101714 HCL		
Lab Sample ID:	MC34459-1	Date Sampled:	10/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101714 HCL		
Lab Sample ID:	MC34459-1	Date Sampled:	10/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101714 ST		
Lab Sample ID:	MC34459-2	Date Sampled:	10/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60064.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	59%		36-173%
460-00-4	Bromofluorobenzene (S)	66%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80973.D	1	10/31/14	JM	n/a	n/a	MSP2649
Run #2 [a]	P81032.D	1	11/03/14	JM	n/a	n/a	MSP2651

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	5.2	5.0	1.1	ug/l	J
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	0.45	1.0	0.25	ug/l	J J
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	9.8	1.0	0.22	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	0.60	2.0	0.39	ug/l	J J
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	0.87	5.0	0.49	ug/l	J J
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.43	5.0	0.18	ug/l	J J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	UJ
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	0.59	1.0	0.38	ug/l	J J
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	0.59	1.0	0.30	ug/l	J J

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	96%	70-130%
2037-26-5	Toluene-D8	104%	105%	70-130%
460-00-4	4-Bromofluorobenzene	179% [b]	186% [b]	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77022.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.53	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.7	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.7	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

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Report of Analysis

Client Sample ID:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.34	ug/l	
78-59-1	Isophorone	ND	5.7	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		15-110%
4165-62-2	Phenol-d5	36%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92438.D	1	10/24/14	WK	10/21/14	OP40300	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.078	0.11	0.078	ug/l	J
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.3	0.57	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.3	0.57	ug/l	
85-01-8	Phenanthrene	ND	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P114-ROX-101714		
Lab Sample ID:	MC34459-3	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60066.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	61%		36-173%
460-00-4	Bromofluorobenzene (S)	55%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80974.D	10	10/31/14	JM	n/a	n/a	MSP2649
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	25	ug/l	
107-02-8	Acrolein	ND	250	60	ug/l	
107-13-1	Acrylonitrile	ND	50	21	ug/l	
71-43-2	Benzene	1830	5.0	2.5	ug/l	
108-86-1	Bromobenzene	ND	50	3.5	ug/l	
74-97-5	Bromochloromethane	ND	50	4.2	ug/l	
75-27-4	Bromodichloromethane	ND	10	4.7	ug/l	
75-25-2	Bromoform	ND	10	3.0	ug/l	
74-83-9	Bromomethane	ND	20	7.7	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	25	ug/l	
104-51-8	n-Butylbenzene	ND	50	11	ug/l	
135-98-8	sec-Butylbenzene	ND	50	4.2	ug/l	
98-06-6	tert-Butylbenzene	ND	50	3.9	ug/l	
75-15-0	Carbon disulfide	ND	50	4.6	ug/l	
56-23-5	Carbon tetrachloride	ND	10	2.3	ug/l	
108-90-7	Chlorobenzene	ND	10	2.5	ug/l	
75-00-3	Chloroethane	ND	20	3.7	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	50	33	ug/l	
67-66-3	Chloroform	ND	10	3.1	ug/l	
74-87-3	Chloromethane	ND	20	5.9	ug/l	
95-49-8	o-Chlorotoluene	ND	50	3.8	ug/l	
106-43-4	p-Chlorotoluene	ND	50	4.5	ug/l	
124-48-1	Dibromochloromethane	ND	10	2.6	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	2.4	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	1.6	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	3.1	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	7.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.3	ug/l	
75-35-4	1,1-Dichloroethene	ND	10	2.9	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	10	4.4	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	4.7	ug/l	

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Report of Analysis

Client Sample ID:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	20	4.5	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	8.9	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	13	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	4.7	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	4.2	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	3.8	ug/l	
123-91-1	1,4-Dioxane	ND	250	110	ug/l	
97-63-2	Ethyl methacrylate	ND	50	5.0	ug/l	
100-41-4	Ethylbenzene	1750	10	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	17	ug/l	
591-78-6	2-Hexanone	ND	50	16	ug/l	
98-82-8	Isopropylbenzene	45.9	50	3.5	ug/l	J
99-87-6	p-Isopropyltoluene	ND	50	3.7	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	2.2	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	50	9.9	ug/l	
74-95-3	Methylene bromide	ND	50	5.2	ug/l	
75-09-2	Methylene chloride	ND	20	3.9	ug/l	
91-20-3	Naphthalene	184	50	6.9	ug/l	J
103-65-1	n-Propylbenzene	70.7	50	4.9	ug/l	
100-42-5	Styrene	ND	50	2.9	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	4.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	10	2.9	ug/l	
108-88-3	Toluene	722	10	2.2	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	6.8	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	50	1.9	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	4.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	3.0	ug/l	
79-01-6	Trichloroethene	ND	10	4.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	5.5	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	8.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	244	50	3.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	39.1	50	1.8	ug/l	J
108-05-4	Vinyl Acetate	ND	50	7.1	ug/l	UJ
75-01-4	Vinyl chloride	ND	10	4.5	ug/l	
	m,p-Xylene	2250	10	3.8	ug/l	
95-47-6	o-Xylene	114	10	3.0	ug/l	
1330-20-7	Xylene (total)	2360	10	3.0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.4

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77023.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.62	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	3.0	11	0.25	ug/l	J
	3&4-Methylphenol	5.9	11	0.52	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	uJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	15.4	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	0.61	5.6	0.19	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	U

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	67%		15-110%
4165-62-2	Phenol-d5	41%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92447.D	1	10/24/14	WK	10/21/14	OP40300	MSI3446
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.36	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	0.072	0.11	0.055	ug/l	J
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.31	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	22.0	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	36.9	2.2	0.56	ug/l	
85-01-8	Phenanthrene	0.79	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	81%		30-130%
1718-51-0	Terphenyl-d14	86%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	T12-ROX-101714		
Lab Sample ID:	MC34459-4	Date Sampled:	10/17/14
Matrix:	AQ - Ground Water	Date Received:	10/18/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60067.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	57%		36-173%
460-00-4	Bromofluorobenzene (S)	82%		36-173%

ND = Not detected MDL = Method Detection Limit
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

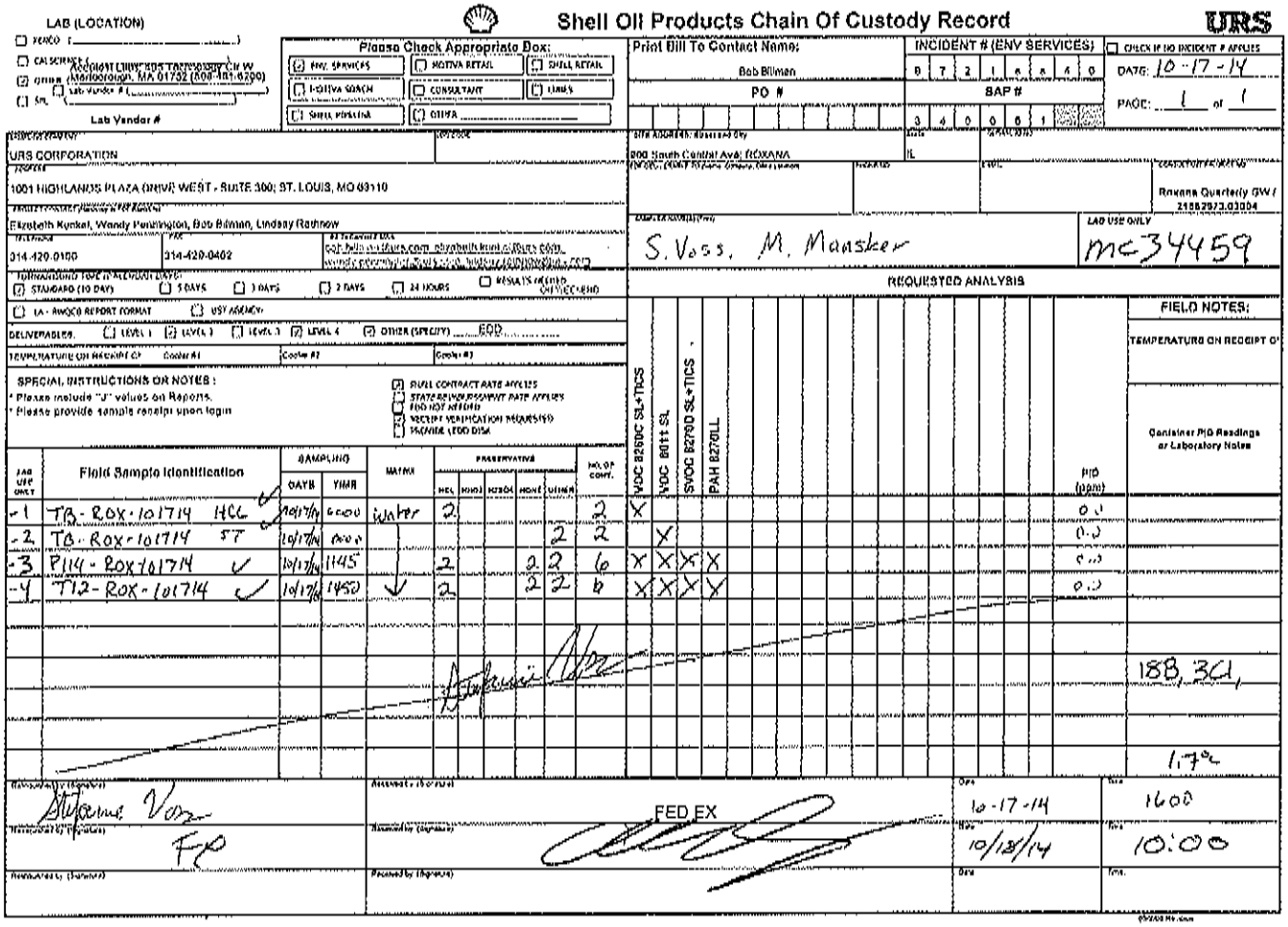
Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



Shell Oil Products Chain Of Custody Record

URS

LAB (LOCATION)

☐ XENCO (_____)

☐ CALSCIENCE

☑ ONSITE Accutest Drive 495 Technology Ctr W (Marlborough, MA 01752 (508-481-6200)

☐ SPL (Lab Vendor # _____)

Lab Vendor #

Please Check Appropriate Box:

☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL

☐ MOTIVA SOAHC ☐ CONSULTANT ☐ LUBES

☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES) 0 7 2 1 8 8 4 0

SAP # 3 4 0 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-17-14

PAGE: 1 of 1

COMPANY NAME: URS CORPORATION

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

PROJECT MANAGER / REPORT TO: Elizabeth Kunkel, Wendy Purrington, Bob Billman, Lindsay Rathnow

TELEPHONE: 314-429-0100 FAX: 314-429-0462

E-mail To: bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.purrington@urs.com, lindsay.rathnow@urs.com

Site Address: Roseland Gas Station: 200 South Central Ave; ROXANA IL

Project #: Roxana Quarterly GW / 21582973.03004

Sampler(s): S. Voss, M. Manske

LAB USE ONLY: MC34459

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON (MM/DD/YY)

☐ LA - ANCO REPORT FORMAT ☐ WSY AGENCY

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMP. (NATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED
☑ ARCHIVE EDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING: DATE	SAMPLING: TIME	MATRIX	PRESERVATIVE: HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	SVOC 8260C SIM TICS	SVOC 8011 SIM	SVOC 8270D SIM TICS	PAH 8270LL	PID (ppm)
-1	TB-ROX-101714 HCL	10/17/14	0600	Water	2					2	X				0.0
-2	TB-ROX-101714 ST	10/17/14	0600						2	2		X			0.0
-3	P14-ROX-101714	10/17/14	1145		2			2	2	6	X	X	X	X	0.0
-4	TB-ROX-101714	10/17/14	1450	↓	2			2	2	6	X	X	X	X	0.0

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

188.3 C1

1.7°C

Relinquished by (Signature)	Received by (Signature)	Date	Time
Stefanie Voss	FED EX	10-17-14	1600
FED EX		10/18/14	10:00
Relinquished by (Signature)	Received by (Signature)	Date	Time

MC34459: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34459 Client: URS Project: 900 SOUTH CENTRAL

Date / Time Received: 10/18/2014 10:00:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (1.7/1.7);

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. Thermometer ID:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	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

5.1

MC34459: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34459

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34459-1 Collected: 17-OCT-14 00:00 By: SVMM Received: 18-OCT-14 By: TB-ROX-101714 HCL						
MC34459-1	SW846 8260C	31-OCT-14 12:21	JM			V8260SL+
MC34459-2 Collected: 17-OCT-14 00:00 By: SVMM Received: 18-OCT-14 By: TB-ROX-101714 ST						
MC34459-2	SW846 8011	23-OCT-14 21:37	NK	21-OCT-14	FC	V8011SL
MC34459-3 Collected: 17-OCT-14 11:45 By: SVMM Received: 18-OCT-14 By: P114-ROX-101714						
MC34459-3	SW846 8011	23-OCT-14 22:13	NK	21-OCT-14	FC	V8011SL
MC34459-3	SW846 8270D BY SIM	24-OCT-14 01:52	WK	21-OCT-14	AZ	B8270SIMSL
MC34459-3	SW846 8270D	24-OCT-14 12:17	MR	21-OCT-14	AZ	AB8270SL+
MC34459-3	SW846 8260C	31-OCT-14 16:18	JM			V8260SL+
MC34459-3	SW846 8260C	03-NOV-14 15:10	JM			V8260SL+
MC34459-4 Collected: 17-OCT-14 14:50 By: SVMM Received: 18-OCT-14 By: T12-ROX-101714						
MC34459-4	SW846 8011	23-OCT-14 22:31	NK	21-OCT-14	FC	V8011SL
MC34459-4	SW846 8270D BY SIM	24-OCT-14 09:25	WK	21-OCT-14	AZ	B8270SIMSL
MC34459-4	SW846 8270D	24-OCT-14 12:40	MR	21-OCT-14	AZ	AB8270SL+
MC34459-4	SW846 8260C	31-OCT-14 16:49	JM			V8260SL+

Accutest Internal Chain of Custody

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/18/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34459-1.1	VOC Ref #3	Jaime Maslowski	10/31/14 11:59	Retrieve from Storage
MC34459-1.1	Jaime Maslowski	GCMSP	10/31/14 11:59	Load on Instrument
MC34459-1.1	GCMSP	Jaime Maslowski	11/03/14 10:31	Unload from Instrument
MC34459-1.1	Jaime Maslowski	VOC Ref #3	11/03/14 10:31	Return to Storage
MC34459-2.1	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34459-3.2	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34459-3.2	Alireza Zeighami		10/21/14 16:33	Depleted
MC34459-3.3	VOC Ref #3	Jaime Maslowski	10/31/14 11:59	Retrieve from Storage
MC34459-3.3	Jaime Maslowski	GCMSP	10/31/14 11:59	Load on Instrument
MC34459-3.3	GCMSP	Jaime Maslowski	11/03/14 10:31	Unload from Instrument
MC34459-3.3	Jaime Maslowski	VOC Ref #3	11/03/14 10:31	Return to Storage
MC34459-3.4	VOC Ref #3	Jaime Maslowski	11/03/14 12:46	Retrieve from Storage
MC34459-3.4	Jaime Maslowski	GCMSP	11/03/14 12:46	Load on Instrument
MC34459-3.4	GCMSP	Jaime Maslowski	11/04/14 10:05	Unload from Instrument
MC34459-3.4	Jaime Maslowski	VOC Ref #3	11/04/14 10:06	Return to Storage
MC34459-3.5	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34459-4.1	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34459-4.1	Alireza Zeighami		10/21/14 16:33	Depleted
MC34459-4.4	VOC Ref #3	Jaime Maslowski	10/31/14 11:59	Retrieve from Storage
MC34459-4.4	Jaime Maslowski	GCMSP	10/31/14 11:59	Load on Instrument
MC34459-4.4	GCMSP	Jaime Maslowski	11/03/14 10:31	Unload from Instrument
MC34459-4.4	Jaime Maslowski	VOC Ref #3	11/03/14 10:31	Return to Storage
MC34459-4.6	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage

5.3

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: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB	P80964.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB	P80964.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB	P80964.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	104%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB1	P80997.D	1	11/02/14	JM	n/a	n/a	MSP2649

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

MC34461-2MS

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB1	P80997.D	1	11/02/14	JM	n/a	n/a	MSP2649

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

MC34461-2MS

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

6.1.2

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-MB1	P80997.D	1	11/02/14	JM	n/a	n/a	MSP2649

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

MC34461-2MS

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	105%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

6.1.2

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-BS	P80962.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	51.3	103	70-130
107-02-8	Acrolein	250	256	102	70-130
107-13-1	Acrylonitrile	50	45.2	90	70-130
71-43-2	Benzene	50	51.2	102	70-130
108-86-1	Bromobenzene	50	50.8	102	70-130
74-97-5	Bromochloromethane	50	54.4	109	70-130
75-27-4	Bromodichloromethane	50	60.7	121	70-130
75-25-2	Bromoform	50	60.6	121	70-130
74-83-9	Bromomethane	50	54.2	108	70-130
78-93-3	2-Butanone (MEK)	50	43.3	87	70-130
104-51-8	n-Butylbenzene	50	51.4	103	70-130
135-98-8	sec-Butylbenzene	50	55.7	111	70-130
98-06-6	tert-Butylbenzene	50	51.9	104	70-130
75-15-0	Carbon disulfide	50	46.6	93	70-130
56-23-5	Carbon tetrachloride	50	62.1	124	70-130
108-90-7	Chlorobenzene	50	50.2	100	70-130
75-00-3	Chloroethane	50	58.5	117	70-130
110-75-8	2-Chloroethyl vinyl ether	50	66.4	133* a	70-130
67-66-3	Chloroform	50	53.1	106	70-130
74-87-3	Chloromethane	50	69.3	139* a	70-130
95-49-8	o-Chlorotoluene	50	50.7	101	70-130
106-43-4	p-Chlorotoluene	50	50.7	101	70-130
124-48-1	Dibromochloromethane	50	59.4	119	70-130
95-50-1	1,2-Dichlorobenzene	50	51.4	103	70-130
541-73-1	1,3-Dichlorobenzene	50	54.3	109	70-130
106-46-7	1,4-Dichlorobenzene	50	53.5	107	70-130
75-71-8	Dichlorodifluoromethane	50	50.6	101	70-130
75-34-3	1,1-Dichloroethane	50	57.2	114	70-130
107-06-2	1,2-Dichloroethane	50	56.0	112	70-130
75-35-4	1,1-Dichloroethene	50	49.8	100	70-130
156-59-2	cis-1,2-Dichloroethene	50	49.1	98	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.8	100	70-130
78-87-5	1,2-Dichloropropane	50	54.3	109	70-130
142-28-9	1,3-Dichloropropane	50	52.0	104	70-130
594-20-7	2,2-Dichloropropane	50	67.5	135* a	70-130
563-58-6	1,1-Dichloropropene	50	56.8	114	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-BS	P80962.D	1	10/31/14	JM	n/a	n/a	MSP2649

6.2.1

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.2	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	56.8	114	70-130
123-91-1	1,4-Dioxane	125	127	102	70-130
97-63-2	Ethyl methacrylate	50	48.0	96	77-137
100-41-4	Ethylbenzene	50	50.4	101	70-130
87-68-3	Hexachlorobutadiene	50	51.5	103	70-130
591-78-6	2-Hexanone	50	51.0	102	70-130
98-82-8	Isopropylbenzene	50	51.7	103	70-130
99-87-6	p-Isopropyltoluene	50	57.0	114	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.6	89	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.0	98	70-130
74-95-3	Methylene bromide	50	51.6	103	70-130
75-09-2	Methylene chloride	50	48.0	96	70-130
91-20-3	Naphthalene	50	67.0	134* a	70-130
103-65-1	n-Propylbenzene	50	53.7	107	70-130
100-42-5	Styrene	50	52.0	104	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.1	112	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.3	99	70-130
127-18-4	Tetrachloroethene	50	55.5	111	70-130
108-88-3	Toluene	50	51.5	103	70-130
87-61-6	1,2,3-Trichlorobenzene	50	31.1	62* a	70-130
120-82-1	1,2,4-Trichlorobenzene	50	46.5	93	70-130
71-55-6	1,1,1-Trichloroethane	50	60.5	121	70-130
79-00-5	1,1,2-Trichloroethane	50	53.5	107	70-130
79-01-6	Trichloroethene	50	54.7	109	70-130
75-69-4	Trichlorofluoromethane	50	49.1	98	70-130
96-18-4	1,2,3-Trichloropropane	50	49.7	99	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.7	111	70-130
108-67-8	1,3,5-Trimethylbenzene	50	53.1	106	70-130
108-05-4	Vinyl Acetate	50	34.3	69* a	70-130
75-01-4	Vinyl chloride	50	51.9	104	70-130
	m,p-Xylene	100	101	101	70-130
95-47-6	o-Xylene	50	50.7	101	70-130
1330-20-7	Xylene (total)	150	152	101	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2649-BS	P80962.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	84%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

6.2.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34461-2MS	P80998.D	5	11/02/14	JM	n/a	n/a	MSP2649
MC34461-2MSD	P80975.D	5	10/31/14	JM	n/a	n/a	MSP2649
MC34461-2	P80968.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	MC34461-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	123	49* [a]	250	108	43* [a]	13	70-130/30
107-02-8	Acrolein	ND		1250	821	66* [a]	1250	880	70	7	70-130/30
107-13-1	Acrylonitrile	ND		250	214	86	250	210	84	2	70-130/30
71-43-2	Benzene	ND		250	261	104	250	259	104	1	70-130/30
108-86-1	Bromobenzene	ND		250	244	98	250	238	95	2	70-130/30
74-97-5	Bromochloromethane	ND		250	280	112	250	265	106	6	70-130/30
75-27-4	Bromodichloromethane	ND		250	313	125	250	301	120	4	70-130/30
75-25-2	Bromoform	ND		250	306	122	250	304	122	1	70-130/30
74-83-9	Bromomethane	ND		250	245	98	250	187	75	27	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	155	62* [a]	250	163	65* [a]	5	70-130/30
104-51-8	n-Butylbenzene	ND		250	227	91	250	241	96	6	70-130/30
135-98-8	sec-Butylbenzene	ND		250	268	107	250	268	107	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	252	101	250	244	98	3	70-130/30
75-15-0	Carbon disulfide	ND		250	230	92	250	227	91	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	313	125	250	299	120	5	70-130/30
108-90-7	Chlorobenzene	ND		250	253	101	250	247	99	2	70-130/30
75-00-3	Chloroethane	ND		250	277	111	250	281	112	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	328	131* [a]	250	321	128	2	70-130/30
67-66-3	Chloroform	ND		250	273	109	250	264	106	3	70-130/30
74-87-3	Chloromethane	1.5	J	250	310	123	250	253	101	20	70-130/30
95-49-8	o-Chlorotoluene	ND		250	246	98	250	241	96	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	242	97	250	239	96	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	298	119	250	290	116	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	243	97	250	243	97	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	255	102	250	254	102	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	252	101	250	251	100	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	240	96	250	240	96	0	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	290	116	250	281	112	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	277	111	250	275	110	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	267	107	250	261	104	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	258	103	250	245	98	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	248	99	250	247	99	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	276	110	250	268	107	3	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	260	104	250	256	102	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	216	86	250	362	145* [a]	51* [b]	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	289	116	250	287	115	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34461-2MS	P80998.D	5	11/02/14	JM	n/a	n/a	MSP2649
MC34461-2MSD	P80975.D	5	10/31/14	JM	n/a	n/a	MSP2649
MC34461-2	P80968.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Compound	MC34461-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	219	88	250	240	96	9	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	244	98	250	274	110	12	70-130/30
123-91-1	1,4-Dioxane	ND		625	573	92	625	662	106	14	70-130/30
97-63-2	Ethyl methacrylate	ND		250	223	89	250	228	91	2	72-139/30
100-41-4	Ethylbenzene	ND		250	256	102	250	261	104	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	229	92	250	243	97	6	70-130/30
591-78-6	2-Hexanone	ND		250	158	63* [a]	250	161	64* [a]	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	251	100	250	249	100	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	270	108	250	270	108	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	0.25	J	250	226	90	250	227	91	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	219	88	250	223	89	2	70-130/30
74-95-3	Methylene bromide	ND		250	261	104	250	255	102	2	70-130/30
75-09-2	Methylene chloride	ND		250	240	96	250	237	95	1	70-130/30
91-20-3	Naphthalene	ND		250	286	114	250	271	108	5	70-130/30
103-65-1	n-Propylbenzene	ND		250	257	103	250	257	103	0	70-130/30
100-42-5	Styrene	ND		250	259	104	250	253	101	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	288	115	250	278	111	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	235	94	250	238	95	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	279	112	250	277	111	1	70-130/30
108-88-3	Toluene	ND		250	259	104	250	258	103	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	116	46* [a]	250	129	52* [a]	11	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	176	70	250	206	82	16	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	312	125	250	304	122	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	262	105	250	263	105	0	70-130/30
79-01-6	Trichloroethene	ND		250	273	109	250	264	106	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	225	90	250	233	93	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	221	88	250	231	92	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.70	J	250	268	107	250	270	108	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	255	102	250	253	101	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	137	55* [a]	250	173	69* [a]	23	70-130/30
75-01-4	Vinyl chloride	ND		250	240	96	250	236	94	2	70-130/30
	m,p-Xylene	ND		500	510	102	500	518	104	2	70-130/30
95-47-6	o-Xylene	ND		250	260	104	250	252	101	3	70-130/30
1330-20-7	Xylene (total)	ND		750	769	103	750	770	103	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34461-2MS	P80998.D	5	11/02/14	JM	n/a	n/a	MSP2649
MC34461-2MSD	P80975.D	5	10/31/14	JM	n/a	n/a	MSP2649
MC34461-2	P80968.D	1	10/31/14	JM	n/a	n/a	MSP2649

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

MC34459-1, MC34459-3, MC34459-4

CAS No.	Surrogate Recoveries	MS	MSD	MC34461-2	Limits
1868-53-7	Dibromofluoromethane	100%	100%	96%	70-130%
2037-26-5	Toluene-D8	103%	103%	105%	70-130%
460-00-4	4-Bromofluorobenzene	82%	81%	104%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

6.3.1

Volatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSP2649-CC2633	Injection Date:	10/31/14
Lab File ID:	P80962.D	Injection Time:	10:43
Instrument ID:	GCMSP	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	799718	8.48	994598	9.32	502994	12.52	463848	15.08	124032	6.17
Upper Limit [a]	1599436	8.98	1989196	9.82	1005988	13.02	927696	15.58	248064	6.67
Lower Limit [b]	399859	7.98	497299	8.82	251497	12.02	231924	14.58	62016	5.67

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP2649-BS	799718	8.48	994598	9.32	502994	12.52	463848	15.08	124032	6.17
MSP2649-MB	639335	8.48	802309	9.33	408379	12.53	283835	15.09	140810	6.20
MC34459-1	653375	8.48	822572	9.33	409738	12.53	284513	15.09	122915	6.20
ZZZZZZ	620768	8.48	792709	9.33	399147	12.53	277961	15.09	144260	6.19
GP18364-LB1	656129	8.48	817053	9.33	407554	12.53	275339	15.09	135370	6.19
MC34461-2	660605	8.48	810120	9.33	407713	12.53	280134	15.08	131496	6.20
ZZZZZZ	608299	8.48	756086	9.33	383006	12.53	262814	15.09	141960	6.20
ZZZZZZ	640664	8.48	789602	9.33	400550	12.53	291803	15.08	128803	6.19
ZZZZZZ	805201	8.48	964837	9.32	460250	12.52	456193	15.08	168610	6.19
ZZZZZZ	704371	8.48	863186	9.32	418971	12.53	382511	15.08	155094	6.19
MC34459-3	668685	8.48	830318	9.33	412516	12.53	332276	15.08	146538	6.18
MC34459-4	729069	8.48	906973	9.32	428543	12.52	382627	15.08	176489	6.19
MC34461-2MSD	759158	8.48	954288	9.32	486635	12.52	463675	15.08	144301	6.16
ZZZZZZ	652763	8.48	809386	9.33	412490	12.53	301159	15.09	130983	6.19
ZZZZZZ	637820	8.48	802893	9.33	402862	12.53	282831	15.09	137824	6.19
ZZZZZZ	611338	8.48	767709	9.33	391746	12.53	287398	15.09	109810	6.20
ZZZZZZ	667479	8.48	817610	9.32	409361	12.53	383659	15.08	128536	6.19
ZZZZZZ	661606	8.48	808100	9.32	403984	12.52	365521	15.08	116503	6.19
ZZZZZZ	678268	8.48	830921	9.33	416442	12.52	341449	15.08	141540	6.19
ZZZZZZ	743627	8.48	904598	9.32	431942	12.53	414398	15.08	147767	6.19
ZZZZZZ	661676	8.48	811205	9.33	411464	12.52	358136	15.08	154592	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.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSP2650-CC2633	Injection Date:	11/02/14
Lab File ID:	P80993.D	Injection Time:	12:29
Instrument ID:	GCMSP	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	790518	8.48	975662	9.32	491167	12.52	455829	15.08	138954	6.17
Upper Limit [a]	1581036	8.98	1951324	9.82	982334	13.02	911658	15.58	277908	6.67
Lower Limit [b]	395259	7.98	487831	8.82	245584	12.02	227915	14.58	69477	5.67
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP2649-BS1	785282	8.47	968783	9.31	481509	12.52	454631	15.08	113566	6.16
MSP2649-MB1	634288	8.48	810582	9.33	419308	12.53	294363	15.09	137610	6.19
MC34461-2MS	754014	8.47	948718	9.31	476638	12.53	458801	15.08	129610	6.16

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.

6.4.2

Volatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSP2651-CC2633	Injection Date:	11/03/14
Lab File ID:	P81021.D	Injection Time:	09:24
Instrument ID:	GCMSP	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	783701	8.48	974875	9.32	494820	12.53	456073	15.08	124733	6.17
Upper Limit [a]	1567402	8.98	1949750	9.82	989640	13.03	912146	15.58	249466	6.67
Lower Limit [b]	391851	7.98	487438	8.82	247410	12.03	228037	14.58	62367	5.67
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP2651-BS	783701	8.48	974875	9.32	494820	12.53	456073	15.08	124733	6.17
MSP2651-MB	632230	8.48	783938	9.33	407038	12.53	252040	15.09	114451	6.21
ZZZZZZ	645247	8.48	799075	9.33	401992	12.53	265993	15.09	133288	6.18
ZZZZZZ	627256	8.48	794271	9.33	402335	12.53	270448	15.09	137246	6.20
ZZZZZZ	619969	8.48	785088	9.33	402148	12.53	263249	15.09	134412	6.19
ZZZZZZ	620041	8.49	798159	9.35	377028	12.54	231939	15.09	0[c]	0.00*
MC34551-4	583953	8.48	740782	9.33	380435	12.53	251778	15.09	135046	6.19
ZZZZZZ	596871	8.48	759855	9.33	384836	12.53	252783	15.09	134344	6.19
ZZZZZZ	627693	8.48	793065	9.33	404955	12.53	254198	15.09	114640	6.19
MC34459-3 [d]	619913	8.48	764000	9.33	386887	12.53	292215	15.08	158424	6.19
MC34551-4MS	708359	8.48	891376	9.32	450408	12.52	437390	15.08	122674	6.17
MC34551-4MSD	583113	8.48	731431	9.32	375722	12.53	360905	15.08	124906	6.17
ZZZZZZ	594515	8.48	743587	9.33	380993	12.53	269342	15.09	131496	6.19
MSP2651-ECC263215907	8.47	889158	9.31	451063	12.52	422599	15.08	104972	6.16	

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) Outside control limits. Target analytes not associated with this internal standard.
(d) Confirmation run for surrogate recoveries.

6.4.3

Volatile Surrogate Recovery Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34459-1	P80965.D	97	104	106
MC34459-3	P81032.D	96	105	186* [a]
MC34459-3	P80973.D	95	104	179* [a]
MC34459-4	P80974.D	96	102	93
MC34461-2MS	P80998.D	100	103	82
MC34461-2MSD	P80975.D	100	103	81
MSP2649-BS	P80962.D	100	103	84
MSP2649-MB	P80964.D	98	105	104
MSP2649-MB1	P80997.D	98	105	102

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

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MB	F77013.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MB	F77013.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	51%	15-110%
4165-62-2	Phenol-d5	35%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	81%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

7.1.1

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-MB	I92423.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	81%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-BS	F77014.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.5	35	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.7	75	30-130
120-83-2	2,4-Dichlorophenol	50	38.1	76	30-130
105-67-9	2,4-Dimethylphenol	50	32.3	65	30-130
51-28-5	2,4-Dinitrophenol	50	57.5	115	30-130
534-52-1	4,6-Dinitro-o-cresol	50	57.8	116	30-130
95-48-7	2-Methylphenol	50	34.5	69	30-130
	3&4-Methylphenol	100	63.2	63	30-130
88-75-5	2-Nitrophenol	50	39.8	80	30-130
100-02-7	4-Nitrophenol	50	14.2	28* [a]	30-130
87-86-5	Pentachlorophenol	50	37.8	76	30-130
108-95-2	Phenol	50	14.9	30	30-130
95-95-4	2,4,5-Trichlorophenol	50	35.8	72	30-130
88-06-2	2,4,6-Trichlorophenol	50	38.2	76	30-130
62-53-3	Aniline	50	28.8	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.7	85	40-140
85-68-7	Butyl benzyl phthalate	50	49.6	99	40-140
100-51-6	Benzyl Alcohol	50	24.1	48	40-140
91-58-7	2-Chloronaphthalene	50	42.6	85	40-140
106-47-8	4-Chloroaniline	50	34.6	69	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.2	78	40-140
111-44-4	bis(2-Chloroethyl)ether	50	41.2	82	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	53.9	108	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	38.6	77	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.1	86	40-140
121-14-2	2,4-Dinitrotoluene	50	45.9	92	40-140
606-20-2	2,6-Dinitrotoluene	50	45.8	92	40-140
91-94-1	3,3'-Dichlorobenzidine	50	54.2	108	40-140
132-64-9	Dibenzofuran	50	38.5	77	40-140
84-74-2	Di-n-butyl phthalate	50	43.6	87	40-140
117-84-0	Di-n-octyl phthalate	50	45.2	90	40-140
84-66-2	Diethyl phthalate	50	41.3	83	40-140
131-11-3	Dimethyl phthalate	50	42.6	85	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	51.6	103	40-140
118-74-1	Hexachlorobenzene	50	41.2	82	40-140

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-BS	F77014.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	23.5	47	40-140
67-72-1	Hexachloroethane	50	30.1	60	40-140
78-59-1	Isophorone	50	36.8	74	40-140
88-74-4	2-Nitroaniline	50	44.5	89	40-140
99-09-2	3-Nitroaniline	50	40.2	80	40-140
100-01-6	4-Nitroaniline	50	39.9	80	40-140
98-95-3	Nitrobenzene	50	38.8	78	40-140
62-75-9	n-Nitrosodimethylamine	50	30.0	60	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.6	87	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.4	83	40-140
110-86-1	Pyridine	50	13.8	28* [a]	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-BS	I92424.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	40.8	82	40-140
208-96-8	Acenaphthylene	50	35.4	71	40-140
120-12-7	Anthracene	50	42.0	84	40-140
56-55-3	Benzo(a)anthracene	50	48.1	96	40-140
50-32-8	Benzo(a)pyrene	50	45.9	92	40-140
205-99-2	Benzo(b)fluoranthene	50	49.4	99	40-140
191-24-2	Benzo(g,h,i)perylene	50	46.2	92	40-140
207-08-9	Benzo(k)fluoranthene	50	42.0	84	40-140
218-01-9	Chrysene	50	43.7	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.7	93	40-140
206-44-0	Fluoranthene	50	38.8	78	40-140
86-73-7	Fluorene	50	48.2	96	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	38.1	76	40-140
91-57-6	2-Methylnaphthalene	50	39.0	78	40-140
85-01-8	Phenanthrene	50	42.9	86	40-140
129-00-0	Pyrene	50	37.8	76	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	80%	30-130%
1718-51-0	Terphenyl-d14	81%	30-130%

* = Outside of Control Limits.

7.2.2

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MS	F77015.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
OP40299-MSD	F77016.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
MC34100-11	R40554.D	1	10/27/14	KD	10/21/14	OP40299	MSR1493

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

7.3.1

CAS No.	Compound	MC34100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	17.2	34	50	16.8	34	2	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.8	74	50	34.6	69	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	37.8	76	50	36.2	72	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	37.6	75	50	35.4	71	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.5	63	50	28.1	56	11	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	60.0	120	50	60.1	120	0	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	56.2	112	50	58.3	117	4	30-130/20
95-48-7	2-Methylphenol	ND		50	32.8	66	50	29.9	60	9	30-130/20
	3&4-Methylphenol	ND		100	61.6	62	100	58.0	58	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	39.2	78	50	37.3	75	5	30-130/20
100-02-7	4-Nitrophenol	ND		50	13.7	27* [a]	50	13.8	28* [a]	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	37.0	74	50	37.3	75	1	30-130/20
108-95-2	Phenol	ND		50	14.4	29* [a]	50	13.8	28* [a]	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	35.8	72	50	33.4	67	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	36.8	74	50	36.7	73	0	30-130/20
62-53-3	Aniline	ND		50	24.6	49	50	22.8	46	8	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	41.8	84	50	42.7	85	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	49.4	99	50	49.6	99	0	40-140/20
100-51-6	Benzyl Alcohol	ND		50	25.1	50	50	22.4	45	11	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	42.4	85	50	40.9	82	4	40-140/20
106-47-8	4-Chloroaniline	ND		50	34.4	69	50	32.9	66	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	39.0	78	50	36.1	72	8	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	41.1	82	50	37.6	75	9	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	53.0	106	50	49.6	99	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	38.3	77	50	38.3	77	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	42.8	86	50	43.3	87	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	45.4	91	50	45.1	90	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	46.2	92	50	45.0	90	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	54.4	109	50	52.8	106	3	40-140/20
132-64-9	Dibenzofuran	ND		50	38.4	77	50	37.7	75	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	43.5	87	50	43.3	87	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	44.2	88	50	44.6	89	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	41.3	83	50	41.1	82	0	40-140/20
131-11-3	Dimethyl phthalate	ND		50	42.1	84	50	42.2	84	0	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	51.7	103	50	51.8	104	0	40-140/20
118-74-1	Hexachlorobenzene	ND		50	40.6	81	50	41.0	82	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MS	F77015.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
OP40299-MSD	F77016.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
MC34100-11	R40554.D	1	10/27/14	KD	10/21/14	OP40299	MSR1493

The QC reported here applies to the following samples: Method: SW846 8270D

MC34459-3, MC34459-4

CAS No.	Compound	MC34100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	23.3	47	50	21.6	43	8	40-140/20
67-72-1	Hexachloroethane	ND		50	30.9	62	50	29.6	59	4	40-140/20
78-59-1	Isophorone	ND		50	36.5	73	50	34.6	69	5	40-140/20
88-74-4	2-Nitroaniline	ND		50	43.9	88	50	44.1	88	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.8	82	50	40.2	80	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	40.6	81	50	39.4	79	3	40-140/20
98-95-3	Nitrobenzene	ND		50	38.8	78	50	36.2	72	7	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	30.4	61	50	27.6	55	10	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.3	87	50	40.6	81	6	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.5	81	50	41.2	82	2	40-140/20
110-86-1	Pyridine	ND		50	11.9	24* [a]	50	9.5	19* [a]	22* [b]	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-11 Limits	
367-12-4	2-Fluorophenol	47%	43%	51%	15-110%
4165-62-2	Phenol-d5	33%	28%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	93%	105%	15-110%
4165-60-0	Nitrobenzene-d5	79%	73%	82%	30-130%
321-60-8	2-Fluorobiphenyl	75%	71%	85%	30-130%
1718-51-0	Terphenyl-d14	89%	90%	95%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

7.3.1

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-MS	I92425.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445
OP40300-MSD	I92426.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445
MC34100-12	I92427.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34459-3, MC34459-4

7.3.2

7

CAS No.	Compound	MC34100-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.4	81	50	40.0	80	1	40-140/20
208-96-8	Acenaphthylene	ND		50	35.5	71	50	34.9	70	2	40-140/20
120-12-7	Anthracene	ND		50	42.4	85	50	42.1	84	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	47.6	95	50	47.3	95	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	44.9	90	50	44.7	89	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	45.1	90	50	50.0	100	10	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	45.5	91	50	45.3	91	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	39.5	79	50	40.3	81	2	40-140/20
218-01-9	Chrysene	ND		50	44.0	88	50	43.6	87	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.1	92	50	45.5	91	1	40-140/20
206-44-0	Fluoranthene	ND		50	39.7	79	50	39.0	78	2	40-140/20
86-73-7	Fluorene	ND		50	47.6	95	50	48.1	96	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.0	90	50	44.7	89	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	38.5	77	50	37.2	74	3	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	38.8	78	50	37.1	74	4	40-140/20
85-01-8	Phenanthrene	ND		50	43.6	87	50	43.9	88	1	40-140/20
129-00-0	Pyrene	ND		50	38.4	77	50	37.9	76	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-12	Limits
4165-60-0	Nitrobenzene-d5	84%	78%	77%	30-130%
321-60-8	2-Fluorobiphenyl	79%	75%	72%	30-130%
1718-51-0	Terphenyl-d14	82%	81%	76%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3374-CC3361	Injection Date:	10/24/14
Lab File ID:	F77012.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	80351	4.14	268321	5.19	174204	6.72	314738	8.00	396524	10.57	383698	12.27
Upper Limit [a]	160702	4.64	536642	5.69	348408	7.22	629476	8.50	793048	11.07	767396	12.77
Lower Limit [b]	40176	3.64	134161	4.69	87102	6.22	157369	7.50	198262	10.07	191849	11.77
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40299-MB	90931	4.14	316725	5.19	203417	6.72	387270	8.00	454373	10.56	445536	12.27
OP40299-BS	87440	4.14	308603	5.19	197061	6.72	366496	8.00	461227	10.57	439548	12.27
OP40299-MS	82458	4.14	289463	5.19	186365	6.72	353436	8.00	440524	10.57	420636	12.27
OP40299-MSD	86127	4.14	299261	5.19	192367	6.72	354781	8.00	436867	10.57	420358	12.27
ZZZZZZ	81206	4.14	275345	5.19	186349	6.72	356089	8.00	437086	10.57	429373	12.27
ZZZZZZ	103572	4.14	372561	5.19	240380	6.72	462925	8.00	586739	10.57	583854	12.28
ZZZZZZ	85272	4.14	296589	5.19	195859	6.72	365005	8.00	424462	10.57	416597	12.27
ZZZZZZ	85397	4.14	290696	5.19	189975	6.72	360204	8.00	423550	10.57	414730	12.27
MC34459-3	79965	4.14	287719	5.19	195895	6.72	380569	8.00	476031	10.57	478953	12.28
MC34459-4	80497	4.14	282748	5.19	188113	6.72	356583	8.00	432675	10.57	423992	12.27
ZZZZZZ	74255	4.14	254909	5.19	171761	6.72	335050	8.00	404844	10.57	390244	12.27
ZZZZZZ	76499	4.14	266435	5.19	179984	6.72	347229	8.00	424444	10.57	411451	12.27
ZZZZZZ	73607	4.14	257296	5.19	170422	6.72	333745	8.00	406301	10.57	398241	12.27
OP40329-MB	81892	4.14	274909	5.19	177974	6.72	329537	8.00	367511	10.57	341893	12.27
OP40329-BS	75472	4.14	266061	5.19	165865	6.72	296548	8.00	350600	10.57	331989	12.27
OP40329-MS	80456	4.14	284813	5.19	181355	6.72	335061	8.00	395829	10.57	362712	12.27
OP40329-MSD	85934	4.14	299585	5.19	186055	6.72	345612	8.00	392524	10.57	357971	12.27
MC34536-1	92224	4.14	312217	5.19	205154	6.72	380992	8.00	418408	10.57	388879	12.27
ZZZZZZ	83760	4.14	286780	5.19	183594	6.71	344862	8.00	377271	10.57	350812	12.27
ZZZZZZ	75364	4.14	261041	5.19	171397	6.72	322913	8.00	363766	10.57	338701	12.27
ZZZZZZ	79711	4.14	270484	5.19	174144	6.71	323424	8.00	362206	10.57	337244	12.27
ZZZZZZ	65063	4.14	224164	5.19	146930	6.72	282926	8.00	341006	10.57	331397	12.27
ZZZZZZ	66895	4.14	224244	5.19	144374	6.71	269930	8.00	342328	10.57	370291	12.27
ZZZZZZ	76943	4.14	262613	5.19	167113	6.71	310107	8.00	356554	10.57	361585	12.27
ZZZZZZ	71557	4.14	242246	5.19	152362	6.72	285746	8.00	338012	10.57	350376	12.27
ZZZZZZ	62966	4.14	219082	5.19	145315	6.72	283055	8.00	361554	10.57	367425	12.27

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3374-CC3361	Injection Date:	10/24/14
Lab File ID:	F77012.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	279383	2.82	644600	3.84	373968	5.33	667028	6.57	610503	9.22	1064015	10.60
Upper Limit [a]	558766	3.32	1289200	4.34	747936	5.83	1334056	7.07	1221006	9.72	2128030	11.10
Lower Limit [b]	139692	2.32	322300	3.34	186984	4.83	333514	6.07	305252	8.72	532008	10.10
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	345815	2.82	778436	3.84	446372	5.33	791302	6.56	742193	9.22	1298288	10.60
ZZZZZZ	363516	2.82	824379	3.84	475419	5.33	850212	6.56	788775	9.22	1405118	10.60
ZZZZZZ	370348	2.82	823010	3.84	479455	5.33	862229	6.56	793486	9.22	1402664	10.60
ZZZZZZ	357647	2.82	795387	3.84	459926	5.33	826344	6.56	768946	9.22	1354885	10.60
ZZZZZZ	372445	2.83	842079	3.84	471336	5.33	838194	6.56	783493	9.22	1378762	10.60
ZZZZZZ	296387	2.82	650642	3.84	371890	5.34	674648	6.58	655222	9.22	1133480	10.60
ZZZZZZ	286316	2.82	642932	3.84	369235	5.33	680381	6.57	645629	9.22	1132926	10.60
ZZZZZZ	380327	2.82	844664	3.84	512481	5.33	878012	6.57	833620	9.23	1471264	10.61
ZZZZZZ	407752	2.82	943127	3.84	620571	5.33	933287	6.57	878512	9.23	1553982	10.61
ZZZZZZ	470653	2.82	1052429	3.84	601258	5.33	1054930	6.57	993558	9.23	1726372	10.61
ZZZZZZ	423414	2.82	938563	3.84	543234	5.33	971918	6.57	909071	9.22	1607591	10.61
ZZZZZZ	312339	2.82	723215	3.84	435193	5.33	735569	6.57	682459	9.22	1204095	10.60
OP40300-MB	319266	2.82	732475	3.84	425924	5.32	765587	6.56	721184	9.22	1257918	10.60
OP40300-BS	319395	2.82	750006	3.84	431900	5.33	775143	6.57	712113	9.23	1238057	10.61
OP40300-MS	325093	2.82	760237	3.84	435680	5.33	763554	6.57	691922	9.23	1204406	10.61
OP40300-MSD	317579	2.82	748522	3.84	430819	5.33	772804	6.57	708264	9.23	1228215	10.61
MC34100-12	368639	2.82	831476	3.84	486004	5.33	880745	6.56	830938	9.22	1478734	10.60
ZZZZZZ	284575	2.82	653275	3.84	378182	5.32	674780	6.56	635914	9.22	1132721	10.60
ZZZZZZ	294345	2.82	664385	3.84	387325	5.32	692835	6.56	645517	9.22	1141928	10.60
ZZZZZZ	294767	2.82	670247	3.84	388334	5.32	688858	6.56	653406	9.22	1166095	10.60
ZZZZZZ	302286	2.82	693596	3.84	398757	5.33	705186	6.56	663393	9.22	1166299	10.60
ZZZZZZ	306751	2.82	705808	3.84	400579	5.33	713274	6.56	667256	9.22	1176538	10.60
ZZZZZZ	284513	2.82	657137	3.84	379123	5.32	664806	6.56	637403	9.22	1129211	10.60
ZZZZZZ	310570	2.82	708592	3.84	409978	5.32	719365	6.56	683768	9.22	1211366	10.60
ZZZZZZ	363327	2.82	850361	3.84	479960	5.33	843509	6.57	785140	9.23	1338912	10.61
ZZZZZZ	321941	2.83	746862	3.84	424023	5.33	761960	6.56	682489	9.22	1179102	10.60
ZZZZZZ	326469	2.82	754969	3.84	432339	5.33	764262	6.56	685648	9.22	1180768	10.60
MC34459-3	326914	2.82	745052	3.84	428650	5.33	769185	6.57	715706	9.23	1235310	10.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3446-CC3427	Injection Date:	10/24/14
Lab File ID:	I92444.D	Injection Time:	08:17
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	272435	2.79	609399	3.81	356904	5.29	638917	6.53	595334	9.18	1028885	10.56
Upper Limit [a]	544870	3.29	1218798	4.31	713808	5.79	1277834	7.03	1190668	9.68	2057770	11.06
Lower Limit [b]	136218	2.29	304700	3.31	178452	4.79	319459	6.03	297667	8.68	514443	10.06
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40266-MB	302298	2.79	675467	3.81	392228	5.29	695770	6.53	661311	9.18	1155691	10.56
OP40266-BS	302895	2.79	690722	3.81	398772	5.30	699613	6.53	650108	9.19	1124124	10.56
MC34459-4	318062	2.79	717104	3.81	410486	5.30	728336	6.53	678642	9.18	1190926	10.56
ZZZZZZ	306533	2.79	691693	3.81	398833	5.29	709940	6.53	659574	9.18	1149461	10.56
OP40266-BSD	273393	2.79	621851	3.81	361366	5.30	632969	6.53	590844	9.19	1010909	10.56
OP40266-MS	292207	2.79	657570	3.81	381041	5.30	674059	6.53	629402	9.19	1091543	10.56
OP40266-MSD	286066	2.79	647930	3.81	381202	5.30	667291	6.53	621890	9.19	1072484	10.56
MC34427-8	314338	2.79	701616	3.81	405893	5.29	724224	6.53	686306	9.18	1199947	10.56
OP40343-MB	316046	2.79	705630	3.81	407106	5.29	740084	6.53	678817	9.18	1181458	10.56
OP40343-BS	328917	2.79	746917	3.81	435987	5.29	768490	6.53	709361	9.19	1225594	10.57
ZZZZZZ	324851	2.79	729065	3.81	427756	5.29	756450	6.53	713131	9.18	1238776	10.56
ZZZZZZ	315057	2.79	706541	3.81	410044	5.29	726763	6.53	681069	9.18	1180416	10.56
OP40343-MS	335520	2.79	765249	3.81	448574	5.29	784362	6.53	730982	9.19	1253347	10.57
OP40343-MSD	310218	2.79	717424	3.81	413358	5.29	730964	6.53	675990	9.19	1165351	10.56
MC34100-20	303413	2.79	679383	3.81	398366	5.29	701479	6.53	645774	9.18	1123656	10.56
ZZZZZZ	295239	2.79	666263	3.81	389185	5.29	688356	6.53	639447	9.18	1103567	10.56
ZZZZZZ	301897	2.79	674397	3.81	392925	5.29	694874	6.52	649088	9.18	1120562	10.56
ZZZZZZ	295509	2.79	660772	3.81	384349	5.29	680196	6.53	632588	9.18	1099142	10.56
ZZZZZZ	284910	2.79	640266	3.81	371208	5.29	656637	6.53	614217	9.18	1065352	10.56
ZZZZZZ	306303	2.79	674643	3.81	398151	5.29	693160	6.53	653878	9.18	1135203	10.56
ZZZZZZ	287215	2.79	643100	3.81	374757	5.29	664561	6.53	622094	9.17	1087963	10.56
ZZZZZZ	316075	2.79	707978	3.81	412041	5.29	730767	6.53	673206	9.18	1169046	10.56
ZZZZZZ	315054	2.79	697956	3.81	405808	5.29	715419	6.53	671716	9.18	1160226	10.56
ZZZZZZ	305849	2.79	681594	3.81	396994	5.29	704170	6.52	651918	9.17	1120812	10.56
ZZZZZZ	309019	2.79	689056	3.81	401328	5.29	712039	6.53	667359	9.17	1158458	10.56
ZZZZZZ	281622	2.79	634871	3.81	368220	5.29	650620	6.53	607223	9.17	1048351	10.55
ZZZZZZ	282189	2.79	632245	3.81	368398	5.29	642988	6.53	606208	9.17	1047787	10.55
ZZZZZZ	304841	2.79	685377	3.81	396921	5.29	710154	6.53	663771	9.17	1138569	10.55

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3446-CC3427	Injection Date:	10/24/14
Lab File ID:	I92444.D	Injection Time:	08:17
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT

(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.

Semivolatile Surrogate Recovery Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34459-3	F77022.D	52	36	91	78	69	89
MC34459-4	F77023.D	67	41	101	87	76	99
OP40299-BS	F77014.D	49	33	91	78	76	90
OP40299-MB	F77013.D	51	35	92	81	78	96
OP40299-MS	F77015.D	47	33	90	79	75	89
OP40299-MSD	F77016.D	43	28	93	73	71	90

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34459-3	I92438.D	82	75	82
MC34459-4	I92447.D	87	81	86
OP40300-BS	I92424.D	85	80	81
OP40300-MB	I92423.D	87	81	83
OP40300-MS	I92425.D	84	79	82
OP40300-MSD	I92426.D	78	75	81

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MB	BB60044.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34459-2, MC34459-3, MC34459-4

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	69%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-BS	BB60045.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34459-2, MC34459-3, MC34459-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.075	106	60-140
106-93-4	1,2-Dibromoethane	0.071	0.076	107	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	75%	36-173%
460-00-4	Bromofluorobenzene (S)	77%	36-173%

8.2.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MS	BB60046.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
OP40305-MSD	BB60047.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
MC34100-13	BB60048.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34459-2, MC34459-3, MC34459-4

CAS No.	Compound	MC34100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.075	106	9	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.075	106	0.071	0.077	108	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-13	Limits
460-00-4	Bromofluorobenzene (S)	83%	73%	71%	36-173%
460-00-4	Bromofluorobenzene (S)	87%	74%	74%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011	Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34459-2	BB60064.D	59	66
MC34459-3	BB60066.D	61	55
MC34459-4	BB60067.D	57	82
OP40305-BS	BB60045.D	75	77
OP40305-MB	BB60044.D	69	71
OP40305-MS	BB60046.D	83	87
OP40305-MSD	BB60047.D	73	74

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

GC Surrogate Retention Time Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-ICC3339	Injection Date:	10/23/14
Lab File ID:	BB60040.D	Injection Time:	14:08
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40305-MB	BB60044.D	10/23/14	15:39	3.32	3.33
OP40306-MB	BB60044A.D	10/23/14	15:39	3.32	3.33
OP40306-BS	BB60045A.D	10/23/14	15:57	3.32	3.33
OP40305-BS	BB60045.D	10/23/14	15:57	3.32	3.33
OP40305-MS	BB60046.D	10/23/14	16:15	3.33	3.33
OP40305-MSD	BB60047.D	10/23/14	16:33	3.32	3.33
MC34100-13	BB60048.D	10/23/14	16:51	3.32	3.33
ZZZZZZ	BB60049.D	10/23/14	17:09	3.32	3.33
ZZZZZZ	BB60050.D	10/23/14	17:27	3.32	3.33
ZZZZZZ	BB60051.D	10/23/14	17:45	3.33	3.33
ZZZZZZ	BB60052.D	10/23/14	18:03	3.32	3.33
ZZZZZZ	BB60053.D	10/23/14	18:21	3.33	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-CC3339	Injection Date:	10/23/14
Lab File ID:	BB60054.D	Injection Time:	18:38
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB60055.D	10/23/14	18:56	3.32	3.33
ZZZZZZ	BB60056.D	10/23/14	19:14	3.32	3.33
ZZZZZZ	BB60057.D	10/23/14	19:32	3.32	3.33
ZZZZZZ	BB60058.D	10/23/14	19:50	3.32	3.33
ZZZZZZ	BB60059.D	10/23/14	20:08	3.32	3.33
ZZZZZZ	BB60060.D	10/23/14	20:26	3.32	3.33
ZZZZZZ	BB60061.D	10/23/14	20:44	3.33	3.33
ZZZZZZ	BB60062.D	10/23/14	21:02	3.33	3.34
ZZZZZZ	BB60063.D	10/23/14	21:19	3.33	3.33
MC34459-2	BB60064.D	10/23/14	21:37	3.32	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

GC Surrogate Retention Time Summary

Job Number: MC34459
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-CC3339	Injection Date:	10/23/14
Lab File ID:	BB60065.D	Injection Time:	21:55
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34459-3	BB60066.D	10/23/14	22:13	3.32	3.33
MC34459-4	BB60067.D	10/23/14	22:31	3.32	3.33
GBB3339-ECC333B	BB60070.D	10/23/14	23:26	3.33	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.3

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34463

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/17/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
TB-ROX-101614-HCL	TB-ROX-101614-ST
MW4-ROX-101614	MW8-ROX-101614
MW7-ROX-101614	MW7-ROX-101614-Dup

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. VOC MS/MSD recoveries were outside evaluation criteria in sample MW4-ROX-101614. Samples were diluted due to high levels of VOCs. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene, and 4-chloroaniline exceeded 30 percent difference (%D). Also, the continuing calibration verification for chloromethane exceeded 40%D. Lastly, continuing calibration check for 1,2-dibromoethane and 1,2-dibromo-3-chloropropane exceeded criteria.

The cooler receipt form did not indicate any problems, however the laboratory issued a letter indicating that VOC samples, including trip blanks, were received headspace free, and that the cooler receipt form had been inadvertently left blank with regards to trip blanks and VOC headspace.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSP2648-BS	VOCs	2-Chloroethyl vinyl ether	**132**	70-130
MSP2648-BS	VOCs	Chloromethane	**138**	70-130
MSP2648-BS	VOCs	1,2,3-Trichlorobenzene	**67**	70-130
MSP2648-BS	VOCs	Vinyl acetate	**69**	70-130
OP40299-BS	SVOCs	4-Nitrophenol	**28**	30-130
OP40299-BS	SVOCs	Pyridine	**28**	40-140

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. LCS MSP2648-BS and OP40299-BS were associated with the trip blanks. Blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-101614	VOCs	1,2,3-Trichlorobenzene	**UJ**
MW4-ROX-101614	VOCs	Vinyl acetate	**UJ**
MW8-ROX-101614	VOCs	1,2,3-Trichlorobenzene	**UJ**
MW8-ROX-101614	VOCs	Vinyl acetate	**UJ**
MW7-ROX-101614	VOCs	1,2,3-Trichlorobenzene	**UJ**
MW7-ROX-101614	VOCs	Vinyl acetate	**UJ**
MW7-ROX-101614-Dup	VOCs	1,2,3-Trichlorobenzene	**UJ**
MW7-ROX-101614-Dup	VOCs	Vinyl acetate	**UJ**
MW4-ROX-101614	SVOCs	4-Nitrophenol	**UJ**
MW4-ROX-101614	SVOCs	Pyridine	**UJ**
MW8-ROX-101614	SVOCs	4-Nitrophenol	**UJ**
MW8-ROX-101614	SVOCs	Pyridine	**UJ**
MW7-ROX-101614	SVOCs	4-Nitrophenol	**UJ**
MW7-ROX-101614	SVOCs	Pyridine	**UJ**
MW7-ROX-101614-Dup	SVOCs	4-Nitrophenol	**UJ**
MW7-ROX-101614-Dup	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample MW4-ROX-101614 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
MW4-ROX-101614	VOCs	Acetone	**58/55**	6	70-130/30
MW4-ROX-101614	VOCs	Benzene	**51/51**	0	70-130/30
MW4-ROX-101614	VOCs	2-Butanone (MEK)	**64/67**	4	70-130/30
MW4-ROX-101614	VOCs	2-Chloroethyl vinyl ether	**154/152**	2	70-130/30
MW4-ROX-101614	VOCs	Chloromethane	**138/142**	3	70-130/30
MW4-ROX-101614	VOCs	2,2-Dichloropropane	**132/134**	2	70-130/30
MW4-ROX-101614	VOCs	2-Hexanone	**67**/70	5	70-130/30
MW4-ROX-101614	VOCs	1,2,3-Trichlorobenzene	**49/60**	20	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
MW7-ROX-101614	MW7-ROX-101614-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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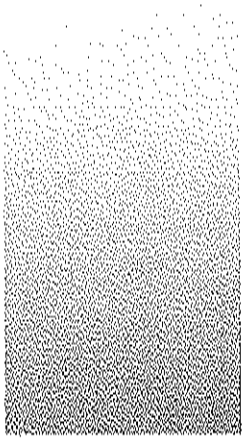
11/10/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34463

Sampling Date: 10/16/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **82**

Reviewed on 11/17/14

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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November 19, 2014

In response to a job inquiry into Accutest report number MC34463, a review of the sample receipt summary indicated the following.

The sample receipt summary was not initially completed appropriately. This form does not have pre-populated fields and it's completion with the appropriate checked boxes was initially missed as an oversight. Sample receiving group reviewed the form and the bottle ware to ensure no problems were encountered. Sample Receiving Form was then filled out appropriately and re-submitted to the client.

Please do not hesitate to call me at (508) 481-6200 ext. 2117 if you have any questions or require additional information. I can also be reached by email at robertt@accutest.com.

Sincerely,

Robert Treggiari | Quality Assurance Manager

Accutest Laboratories of New England

Tel: 508-481 6200 x 2117

Fax: 508-481 7753

"The National Testing Laboratory with Total Performance you can count on"

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Sample Summary

Shell Oil

Job No: MC34463

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34463-1	10/16/14	00:00	SVMM	10/20/14	AQ	Trip Blank Water	TB-ROX-101614-HCL
MC34463-2	10/16/14	00:00	SVMM	10/20/14	AQ	Trip Blank Water	TB-ROX-101614-ST
MC34463-3	10/16/14	09:15	SVMM	10/20/14	AQ	Ground Water	MW4-ROX-101614
MC34463-4	10/16/14	10:50	SVMM	10/20/14	AQ	Ground Water	MW8-ROX-101614
MC34463-5	10/16/14	13:30	SVMM	10/20/14	AQ	Ground Water	MW7-ROX-101614
MC34463-6	10/16/14	13:30	SVMM	10/20/14	AQ	Ground Water	MW7-ROX-101614-DUP

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34463
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	11/3/2014 11:15:21 AM

4 Sample(s) and 2 Trip Blank(s) were collected on 10/16/2014 and were received at Accutest on 10/20/2014 properly preserved, at 5 Deg. C and intact. These Samples received an Accutest job number of MC34463. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix AQ **Batch ID:** MSP2648

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC34463-3MS, MC34463-3MSD were used as the QC samples indicated.
- Continuing calibration check standard MSP2648-CC2633 for chloromethane exceed 40% Difference (response bias high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether, Chloromethane, Vinyl Acetate are outside control limits. Blank Spike meets program technical requirements.
- MC34463-3MS/MSD for Benzene is outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC34463-3MS for Acetone, 2-Butanone (MEK), 2,2-Dichloropropane, 2-Hexanone: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification standard MSP2634-ICV2633 for 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene exceed 30% Difference (response bias high). Associated samples are non-detect for these compounds.
- MC34463-3MSD for Acetone, 2-Butanone (MEK), 2,2-Dichloropropane: Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC34463-3MS/MSD for 1,2,3-Trichlorobenzene, 2-Chloroethyl vinyl ether, Chloromethane: Outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP40299

- 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.
- Sample(s) MC34100-11MS, MC34100-11MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for 4-Nitrophenol, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP40299-MS/MSD Recovery(s) for 4-Nitrophenol, Phenol, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration verification standard MSF3361-ICV3361 for 4-Chloroaniline exceed 30% Difference. 4-Chloroaniline is within criteria in continuing calibration check standard MSF3374-CC3361.
- RPD(s) for MSD for Pyridine are outside control limits for sample OP40299-MSD. High RPD due to possible matrix interference and/or sample heterogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP40300

- 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.
- Sample(s) MC34100-12MS, MC34100-12MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP40305

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34100-13MS, MC34100-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration check standard GBB3339-CC3339, file BB60065 for 1,2-Dibromoethane (signal #1), 1,2-Dibromo-3-chloropropane (signal #1 and signal #2), exceeds criteria (response bias high). Associated samples are non-detect for this compound.
- Continuing calibration check standard GBB3339-CC3339, signal #1, file BB60054 for 1,2-Dibromo-3-chloropropane exceeds criteria. 1,2-Dibromo-3-chloropropane is reported from signal #2.

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(MC34463).

Summary of Hits

Job Number: MC34463
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34463-1	TB-ROX-101614-HCL					
No hits reported in this sample.						
MC34463-2	TB-ROX-101614-ST					
No hits reported in this sample.						
MC34463-3	MW4-ROX-101614					
Benzene		815	2.5	1.2	ug/l	SW846 8260C
Isopropylbenzene		2.6 J	25	1.7	ug/l	SW846 8260C
Methyl Tert Butyl Ether		37.9	5.0	1.1	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		3.7 J	25	1.5	ug/l	SW846 8260C
m,p-Xylene		8.6	5.0	1.9	ug/l	SW846 8260C
o-Xylene		2.2 J	5.0	1.5	ug/l	SW846 8260C
Xylene (total)		10.8	5.0	1.5	ug/l	SW846 8260C
Phenol		11.5	5.9	0.36	ug/l	SW846 8270D
Phenanthrene		0.029 J	0.059	0.015	ug/l	SW846 8270D BY SIM
MC34463-4	MW8-ROX-101614					
Benzene		486000	5000	2500	ug/l	SW846 8260C
Ethylbenzene		305 J	1000	250	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1190	1000	220	ug/l	SW846 8260C
2,4-Dimethylphenol		9.9 J	11	0.62	ug/l	SW846 8270D
2-Methylphenol		19.0	11	0.25	ug/l	SW846 8270D
3&4-Methylphenol		55.8	11	0.52	ug/l	SW846 8270D
Phenol		126	5.6	0.34	ug/l	SW846 8270D
Acenaphthene		0.21	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene		0.54	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		14.5	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		4.5	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.23	0.056	0.014	ug/l	SW846 8270D BY SIM
MC34463-5	MW7-ROX-101614					
Benzene		1130000	2500	1200	ug/l	SW846 8260C
Phenol		155	5.6	0.34	ug/l	SW846 8270D
Acenaphthene		0.24	0.11	0.077	ug/l	SW846 8270D BY SIM
Fluorene		0.20	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		4.9	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.4	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.28	0.056	0.014	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC34463
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34463-6	MW7-ROX-101614-DUP					
Benzene		984000	2500	1200	ug/l	SW846 8260C
Phenol		133	5.7	0.34	ug/l	SW846 8270D
Acenaphthene		0.22	0.11	0.078	ug/l	SW846 8270D BY SIM
Fluorene		0.19	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		4.7	2.3	0.57	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.0	2.3	0.57	ug/l	SW846 8270D BY SIM
Phenanthrene		0.27	0.057	0.014	ug/l	SW846 8270D BY SIM

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4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TB-ROX-101614-HCL		
Lab Sample ID:	MC34463-1	Date Sampled:	10/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80934.D	1	10/30/14	JM	n/a	n/a	MSP2648
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101614-HCL		
Lab Sample ID:	MC34463-1	Date Sampled:	10/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

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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:	TB-ROX-101614-HCL		
Lab Sample ID:	MC34463-1	Date Sampled:	10/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-101614-ST		
Lab Sample ID:	MC34463-2	Date Sampled:	10/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60059.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.3 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	66%		36-173%
460-00-4	Bromofluorobenzene (S)	73%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80935.D	5	10/30/14	JM	n/a	n/a	MSP2648
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	13	ug/l	
107-02-8	Acrolein	ND	130	30	ug/l	
107-13-1	Acrylonitrile	ND	25	11	ug/l	
71-43-2	Benzene	815	2.5	1.2	ug/l	
108-86-1	Bromobenzene	ND	25	1.7	ug/l	
74-97-5	Bromochloromethane	ND	25	2.1	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	2.4	ug/l	
75-25-2	Bromoform	ND	5.0	1.5	ug/l	
74-83-9	Bromomethane	ND	10	3.9	ug/l	
78-93-3	2-Butanone (MEK)	ND	25	13	ug/l	
104-51-8	n-Butylbenzene	ND	25	5.4	ug/l	
135-98-8	sec-Butylbenzene	ND	25	2.1	ug/l	
98-06-6	tert-Butylbenzene	ND	25	1.9	ug/l	
75-15-0	Carbon disulfide	ND	25	2.3	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	1.2	ug/l	
108-90-7	Chlorobenzene	ND	5.0	1.3	ug/l	
75-00-3	Chloroethane	ND	10	1.9	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25	17	ug/l	
67-66-3	Chloroform	ND	5.0	1.5	ug/l	
74-87-3	Chloromethane	ND	10	3.0	ug/l	
95-49-8	o-Chlorotoluene	ND	25	1.9	ug/l	
106-43-4	p-Chlorotoluene	ND	25	2.2	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	1.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.79	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.6	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	3.6	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	0.99	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	1.7	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	1.5	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5.0	2.2	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	2.4	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	10	2.2	ug/l	
142-28-9	1,3-Dichloropropane	ND	25	4.5	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	6.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	25	2.4	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	2.1	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	1.9	ug/l	
123-91-1	1,4-Dioxane	ND	130	54	ug/l	
97-63-2	Ethyl methacrylate	ND	25	2.5	ug/l	
100-41-4	Ethylbenzene	ND	5.0	1.3	ug/l	
87-68-3	Hexachlorobutadiene	ND	25	8.3	ug/l	
591-78-6	2-Hexanone	ND	25	8.0	ug/l	
98-82-8	Isopropylbenzene	2.6	25	1.7	ug/l	J
99-87-6	p-Isopropyltoluene	ND	25	1.9	ug/l	
1634-04-4	Methyl Tert Butyl Ether	37.9	5.0	1.1	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	4.9	ug/l	
74-95-3	Methylene bromide	ND	25	2.6	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
91-20-3	Naphthalene	ND	25	3.4	ug/l	
103-65-1	n-Propylbenzene	ND	25	2.5	ug/l	
100-42-5	Styrene	ND	25	1.5	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	2.2	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	1.5	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	1.4	ug/l	
108-88-3	Toluene	ND	5.0	1.1	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25	3.4	ug/l	U5
120-82-1	1,2,4-Trichlorobenzene	ND	25	0.93	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	2.1	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	2.7	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25	4.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	3.7	25	1.5	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	25	0.90	ug/l	
108-05-4	Vinyl Acetate	ND	25	3.6	ug/l	U5
75-01-4	Vinyl chloride	ND	5.0	2.2	ug/l	
	m,p-Xylene	8.6	5.0	1.9	ug/l	
95-47-6	o-Xylene	2.2	5.0	1.5	ug/l	J
1330-20-7	Xylene (total)	10.8	5.0	1.5	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77018.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	2.9	ug/l	
95-57-8	2-Chlorophenol	ND	5.9	0.36	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.97	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	0.66	ug/l	
51-28-5	2,4-Dinitrophenol	ND	24	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	2.3	ug/l	
95-48-7	2-Methylphenol	ND	12	0.27	ug/l	
	3&4-Methylphenol	ND	12	0.55	ug/l	
88-75-5	2-Nitrophenol	ND	12	3.4	ug/l	
100-02-7	4-Nitrophenol	ND	24	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND	12	1.3	ug/l	
108-95-2	Phenol	11.5	5.9	0.36	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.44	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.21	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.55	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	0.62	ug/l	
100-51-6	Benzyl Alcohol	ND	12	2.7	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	0.37	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.66	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.34	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.41	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.30	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.28	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.54	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.35	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.31	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.9	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.9	0.33	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.3
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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.24	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.40	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.39	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.36	ug/l	
78-59-1	Isophorone	ND	5.9	0.53	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.47	ug/l	
99-09-2	3-Nitroaniline	ND	12	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	12	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.46	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	1.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.47	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.23	ug/l	
110-86-1	Pyridine	ND	12	0.61	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		15-110%
4165-62-2	Phenol-d5	39%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92434.D	1	10/24/14	WK	10/21/14	OP40300	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.12	0.081	ug/l	
208-96-8	Acenaphthylene	ND	0.12	0.058	ug/l	
120-12-7	Anthracene	ND	0.12	0.11	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.059	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.12	0.034	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.059	0.037	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.12	0.032	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.12	0.045	ug/l	
218-01-9	Chrysene	ND	0.12	0.028	ug/l	
53-70-3	Dibenzo(a;h)anthracene	ND	0.12	0.038	ug/l	
206-44-0	Fluoranthene	ND	0.12	0.048	ug/l	
86-73-7	Fluorene	ND	0.12	0.12	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.4	0.59	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.4	0.59	ug/l	
85-01-8	Phenanthrene	0.029	0.059	0.015	ug/l	J
129-00-0	Pyrene	ND	0.12	0.045	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	82%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW4-ROX-101614		
Lab Sample ID:	MC34463-3	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60060.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	67%		36-173%
460-00-4	Bromofluorobenzene (S)	97%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80936.D	1000	10/30/14	JM	n/a	n/a	MSP2648
Run #2	P80948.D	10000	10/30/14	JM	n/a	n/a	MSP2648

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10000	2500	ug/l	
107-02-8	Acrolein	ND	25000	6000	ug/l	
107-13-1	Acrylonitrile	ND	5000	2100	ug/l	
71-43-2	Benzene	486000 [a]	5000	2500	ug/l	
108-86-1	Bromobenzene	ND	5000	350	ug/l	
74-97-5	Bromochloromethane	ND	5000	420	ug/l	
75-27-4	Bromodichloromethane	ND	1000	470	ug/l	
75-25-2	Bromoform	ND	1000	300	ug/l	
74-83-9	Bromomethane	ND	2000	770	ug/l	
78-93-3	2-Butanone (MEK)	ND	5000	2500	ug/l	
104-51-8	n-Butylbenzene	ND	5000	1100	ug/l	
135-98-8	sec-Butylbenzene	ND	5000	420	ug/l	
98-06-6	tert-Butylbenzene	ND	5000	390	ug/l	
75-15-0	Carbon disulfide	ND	5000	460	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	230	ug/l	
108-90-7	Chlorobenzene	ND	1000	250	ug/l	
75-00-3	Chloroethane	ND	2000	370	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	3300	ug/l	
67-66-3	Chloroform	ND	1000	310	ug/l	
74-87-3	Chloromethane	ND	2000	590	ug/l	
95-49-8	o-Chlorotoluene	ND	5000	380	ug/l	
106-43-4	p-Chlorotoluene	ND	5000	450	ug/l	
124-48-1	Dibromochloromethane	ND	1000	260	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	240	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	160	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	310	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2000	710	ug/l	
75-34-3	1,1-Dichloroethane	ND	1000	200	ug/l	
107-06-2	1,2-Dichloroethane	ND	1000	330	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	290	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	440	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	470	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2000	450	ug/l	
142-28-9	1,3-Dichloropropane	ND	5000	890	ug/l	
594-20-7	2,2-Dichloropropane	ND	5000	1300	ug/l	
563-58-6	1,1-Dichloropropene	ND	5000	470	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	420	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	380	ug/l	
123-91-1	1,4-Dioxane	ND	25000	11000	ug/l	
97-63-2	Ethyl methacrylate	ND	5000	500	ug/l	
100-41-4	Ethylbenzene	305	1000	250	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5000	1700	ug/l	
591-78-6	2-Hexanone	ND	5000	1600	ug/l	
98-82-8	Isopropylbenzene	ND	5000	350	ug/l	
99-87-6	p-Isopropyltoluene	ND	5000	370	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1190	1000	220	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	990	ug/l	
74-95-3	Methylene bromide	ND	5000	520	ug/l	
75-09-2	Methylene chloride	ND	2000	390	ug/l	
91-20-3	Naphthalene	ND	5000	690	ug/l	
103-65-1	n-Propylbenzene	ND	5000	490	ug/l	
100-42-5	Styrene	ND	5000	290	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	430	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	300	ug/l	
127-18-4	Tetrachloroethene	ND	1000	290	ug/l	
108-88-3	Toluene	ND	1000	220	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5000	680	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	5000	190	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	420	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	300	ug/l	
79-01-6	Trichloroethene	ND	1000	400	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	550	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5000	810	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5000	300	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5000	180	ug/l	
108-05-4	Vinyl Acetate	ND	5000	710	ug/l	UJ
75-01-4	Vinyl chloride	ND	1000	450	ug/l	
	m,p-Xylene	ND	1000	380	ug/l	
95-47-6	o-Xylene	ND	1000	300	ug/l	
1330-20-7	Xylene (total)	ND	1000	300	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	96%	70-130%
2037-26-5	Toluene-D8	101%	105%	70-130%
460-00-4	4-Bromofluorobenzene	107%	98%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77019.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	9.9	11	0.62	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	19.0	11	0.25	ug/l	
	3&4-Methylphenol	55.8	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	126	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	89%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	87%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92435.D	1	10/24/14	WK	10/21/14	OP40300	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.21	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	0.54	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	14.5	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	4.5	2.2	0.56	ug/l	
85-01-8	Phenanthrene	0.23	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	80%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW8-ROX-101614		
Lab Sample ID:	MC34463-4	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60061.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	35.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	70%		36-173%
460-00-4	Bromofluorobenzene (S)	77%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80937.D	5000	10/30/14	JM	n/a	n/a	MSP2648
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50000	13000	ug/l	
107-02-8	Acrolein	ND	130000	30000	ug/l	
107-13-1	Acrylonitrile	ND	25000	11000	ug/l	
71-43-2	Benzene	1130000	2500	1200	ug/l	
108-86-1	Bromobenzene	ND	25000	1700	ug/l	
74-97-5	Bromochloromethane	ND	25000	2100	ug/l	
75-27-4	Bromodichloromethane	ND	5000	2400	ug/l	
75-25-2	Bromoform	ND	5000	1500	ug/l	
74-83-9	Bromomethane	ND	10000	3900	ug/l	
78-93-3	2-Butanone (MEK)	ND	25000	13000	ug/l	
104-51-8	n-Butylbenzene	ND	25000	5400	ug/l	
135-98-8	sec-Butylbenzene	ND	25000	2100	ug/l	
98-06-6	tert-Butylbenzene	ND	25000	1900	ug/l	
75-15-0	Carbon disulfide	ND	25000	2300	ug/l	
56-23-5	Carbon tetrachloride	ND	5000	1200	ug/l	
108-90-7	Chlorobenzene	ND	5000	1300	ug/l	
75-00-3	Chloroethane	ND	10000	1900	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25000	17000	ug/l	
67-66-3	Chloroform	ND	5000	1500	ug/l	
74-87-3	Chloromethane	ND	10000	3000	ug/l	
95-49-8	o-Chlorotoluene	ND	25000	1900	ug/l	
106-43-4	p-Chlorotoluene	ND	25000	2200	ug/l	
124-48-1	Dibromochloromethane	ND	5000	1300	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5000	1200	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5000	790	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5000	1600	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10000	3600	ug/l	
75-34-3	1,1-Dichloroethane	ND	5000	990	ug/l	
107-06-2	1,2-Dichloroethane	ND	5000	1700	ug/l	
75-35-4	1,1-Dichloroethene	ND	5000	1500	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5000	2200	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5000	2400	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	10000	2200	ug/l	
142-28-9	1,3-Dichloropropane	ND	25000	4500	ug/l	
594-20-7	2,2-Dichloropropane	ND	25000	6300	ug/l	
563-58-6	1,1-Dichloropropene	ND	25000	2400	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2500	2100	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2500	1900	ug/l	
123-91-1	1,4-Dioxane	ND	130000	54000	ug/l	
97-63-2	Ethyl methacrylate	ND	25000	2500	ug/l	
100-41-4	Ethylbenzene	ND	5000	1300	ug/l	
87-68-3	Hexachlorobutadiene	ND	25000	8300	ug/l	
591-78-6	2-Hexanone	ND	25000	8000	ug/l	
98-82-8	Isopropylbenzene	ND	25000	1700	ug/l	
99-87-6	p-Isopropyltoluene	ND	25000	1900	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5000	1100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25000	4900	ug/l	
74-95-3	Methylene bromide	ND	25000	2600	ug/l	
75-09-2	Methylene chloride	ND	10000	2000	ug/l	
91-20-3	Naphthalene	ND	25000	3400	ug/l	
103-65-1	n-Propylbenzene	ND	25000	2500	ug/l	
100-42-5	Styrene	ND	25000	1500	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5000	2200	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2500	1500	ug/l	
127-18-4	Tetrachloroethene	ND	5000	1400	ug/l	
108-88-3	Toluene	ND	5000	1100	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25000	3400	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	25000	930	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5000	2100	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5000	1500	ug/l	
79-01-6	Trichloroethene	ND	5000	2000	ug/l	
75-69-4	Trichlorofluoromethane	ND	5000	2700	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25000	4100	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	25000	1500	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	25000	900	ug/l	
108-05-4	Vinyl Acetate	ND	25000	3600	ug/l	UJ
75-01-4	Vinyl chloride	ND	5000	2200	ug/l	
	m,p-Xylene	ND	5000	1900	ug/l	
95-47-6	o-Xylene	ND	5000	1500	ug/l	
1330-20-7	Xylene (total)	ND	5000	1500	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77020.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.6	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.93	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.63	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.25	ug/l	
	3&4-Methylphenol	ND	11	0.52	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.60	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	155	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.32	ug/l	

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J = Indicates an estimated value
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Report of Analysis

Client Sample ID:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.58	ug/l	UCJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	55%		15-110%
4165-62-2	Phenol-d5	40%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	85%		30-130%
321-60-8	2-Fluorobiphenyl	76%		30-130%
1718-51-0	Terphenyl-d14	97%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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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:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92436.D	1	10/24/14	WK	10/21/14	OP40300	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	890 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.24	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	0.20	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	4.9	2.2	0.56	ug/l	
91-57-6	2-Methylnaphthalene	7.4	2.2	0.56	ug/l	
85-01-8	Phenanthrene	0.28	0.056	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	85%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-101614		
Lab Sample ID:	MC34463-5	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60062.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	37.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	67%		36-173%
460-00-4	Bromofluorobenzene (S)	83%		36-173%

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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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P80938.D	5000	10/30/14	JM	n/a	n/a	MSP2648
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50000	13000	ug/l	
107-02-8	Acrolein	ND	130000	30000	ug/l	
107-13-1	Acrylonitrile	ND	25000	11000	ug/l	
71-43-2	Benzene	984000	2500	1200	ug/l	
108-86-1	Bromobenzene	ND	25000	1700	ug/l	
74-97-5	Bromochloromethane	ND	25000	2100	ug/l	
75-27-4	Bromodichloromethane	ND	5000	2400	ug/l	
75-25-2	Bromoform	ND	5000	1500	ug/l	
74-83-9	Bromomethane	ND	10000	3900	ug/l	
78-93-3	2-Butanone (MEK)	ND	25000	13000	ug/l	
104-51-8	n-Butylbenzene	ND	25000	5400	ug/l	
135-98-8	sec-Butylbenzene	ND	25000	2100	ug/l	
98-06-6	tert-Butylbenzene	ND	25000	1900	ug/l	
75-15-0	Carbon disulfide	ND	25000	2300	ug/l	
56-23-5	Carbon tetrachloride	ND	5000	1200	ug/l	
108-90-7	Chlorobenzene	ND	5000	1300	ug/l	
75-00-3	Chloroethane	ND	10000	1900	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	25000	17000	ug/l	
67-66-3	Chloroform	ND	5000	1500	ug/l	
74-87-3	Chloromethane	ND	10000	3000	ug/l	
95-49-8	o-Chlorotoluene	ND	25000	1900	ug/l	
106-43-4	p-Chlorotoluene	ND	25000	2200	ug/l	
124-48-1	Dibromochloromethane	ND	5000	1300	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5000	1200	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5000	790	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5000	1600	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10000	3600	ug/l	
75-34-3	1,1-Dichloroethane	ND	5000	990	ug/l	
107-06-2	1,2-Dichloroethane	ND	5000	1700	ug/l	
75-35-4	1,1-Dichloroethene	ND	5000	1500	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	5000	2200	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5000	2400	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	10000	2200	ug/l	
142-28-9	1,3-Dichloropropane	ND	25000	4500	ug/l	
594-20-7	2,2-Dichloropropane	ND	25000	6300	ug/l	
563-58-6	1,1-Dichloropropene	ND	25000	2400	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2500	2100	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2500	1900	ug/l	
123-91-1	1,4-Dioxane	ND	130000	54000	ug/l	
97-63-2	Ethyl methacrylate	ND	25000	2500	ug/l	
100-41-4	Ethylbenzene	ND	5000	1300	ug/l	
87-68-3	Hexachlorobutadiene	ND	25000	8300	ug/l	
591-78-6	2-Hexanone	ND	25000	8000	ug/l	
98-82-8	Isopropylbenzene	ND	25000	1700	ug/l	
99-87-6	p-Isopropyltoluene	ND	25000	1900	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5000	1100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25000	4900	ug/l	
74-95-3	Methylene bromide	ND	25000	2600	ug/l	
75-09-2	Methylene chloride	ND	10000	2000	ug/l	
91-20-3	Naphthalene	ND	25000	3400	ug/l	
103-65-1	n-Propylbenzene	ND	25000	2500	ug/l	
100-42-5	Styrene	ND	25000	1500	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5000	2200	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2500	1500	ug/l	
127-18-4	Tetrachloroethene	ND	5000	1400	ug/l	
108-88-3	Toluene	ND	5000	1100	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	25000	3400	ug/l	UJ
120-82-1	1,2,4-Trichlorobenzene	ND	25000	930	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5000	2100	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5000	1500	ug/l	
79-01-6	Trichloroethene	ND	5000	2000	ug/l	
75-69-4	Trichlorofluoromethane	ND	5000	2700	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	25000	4100	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	25000	1500	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	25000	900	ug/l	
108-05-4	Vinyl Acetate	ND	25000	3600	ug/l	UJ
75-01-4	Vinyl chloride	ND	5000	2200	ug/l	
	m,p-Xylene	ND	5000	1900	ug/l	
95-47-6	o-Xylene	ND	5000	1500	ug/l	
1330-20-7	Xylene (total)	ND	5000	1500	ug/l	

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J = Indicates an estimated value
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Report of Analysis

Client Sample ID:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77021.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.35	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.94	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.45	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.64	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.2	ug/l	
95-48-7	2-Methylphenol	ND	11	0.26	ug/l	
	3&4-Methylphenol	ND	11	0.53	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.3	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.61	ug/l	U
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	133	5.7	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.42	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.20	ug/l	
62-53-3	Aniline	ND	11	0.72	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.53	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.60	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.6	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.63	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.33	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.40	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.38	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.29	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.52	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.34	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.7	0.20	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

4.6

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.7	0.23	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.39	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.38	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.5	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.34	ug/l	
78-59-1	Isophorone	ND	5.7	0.51	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.45	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.6	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.5	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.44	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.46	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.22	ug/l	
110-86-1	Pyridine	ND	11	0.59	ug/l	U

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	34%		15-110%
118-79-6	2,4,6-Tribromophenol	91%		15-110%
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	73%		30-130%
1718-51-0	Terphenyl-d14	91%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92437.D	1	10/24/14	WK	10/21/14	OP40300	MSI3445
Run #2							

	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.22	0.11	0.078	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.056	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.057	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.057	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.031	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.044	ug/l	
218-01-9	Chrysene	ND	0.11	0.027	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.036	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.046	ug/l	
86-73-7	Fluorene	0.19	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.035	ug/l	
90-12-0	1-Methylnaphthalene	4.7	2.3	0.57	ug/l	
91-57-6	2-Methylnaphthalene	7.0	2.3	0.57	ug/l	
85-01-8	Phenanthrene	0.27	0.057	0.014	ug/l	
129-00-0	Pyrene	ND	0.11	0.044	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	75%		30-130%
1718-51-0	Terphenyl-d14	83%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW7-ROX-101614-DUP		
Lab Sample ID:	MC34463-6	Date Sampled:	10/16/14
Matrix:	AQ - Ground Water	Date Received:	10/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60063.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
Run #2							

	Initial Volume	Final Volume
Run #1	36.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	69%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

ND = Not detected MDL = Method Detection Limit
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:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ XENCO (_____)
☐ CALIBRATE (_____)
☑ OTHER Accutest Labs 403 Technology Cir W Marlborough, MA 01752 (508-481-6200)
☐ Lab Vendor # (_____)
☐ SPL (_____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOBCM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 0 7 2 1 5 6 4 0

SAP #: 3 4 0 0 0 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10-16-14

PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsay Rathbow

314-429-0100 | 314-429-0462

bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com, lindsay.rathbow@urs.com

900 South Central Ave; ROXANA

IL

Roxana Quarterly GW / 21562973.03004

Stefanie Voss Melissa Mansker

LAB USE ONLY: MC34463

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON SPECIFIC DATE

☐ TA - RWQCB REPORT FORMAT ☐ UST AGENCY

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C° Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports
* Please provide sample receipt upon login.

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REPORTING/MINIMUM RATE APPLIES
☐ EDD NOT NEEDED
☑ SPECIFY VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NaOH	OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	TB-ROX-101614 HCL	10/14/14	0700	Water	2					2	X				0	
-2	TB-ROX-101614 ST		0000						2	2		X				
-3	MW4-ROX-101614		0915		2			2	2	6	X	X	X	X		
-4	MW8-ROX-101614		1050		2			2	2	6	X	X	X	X		
-5	MW7-ROX-101614		1330		2			2	2	6	X	X	X	X		
-6	MW7-ROX-101614 Dup		1330		2			2	2	6	X	X	X	X		
																302, 198

Relinquished by (Signature)	Received by (Signature)	Date	Time
Stefanie Voss	FED EX	10-16-14	1600
Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	[signature]	10/20/14	920
Relinquished by (Signature)	Received by (Signature)	Date	Time

5.0

5.1

5

MC34463: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34463 Client: URS Project: ROXANA

Date / Time Received: 10/20/2014 9:20:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (5/5):

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. Thermometer ID:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	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

5.1

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MC34463: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34463

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34463-1 Collected: 16-OCT-14 00:00 By: SVMM Received: 20-OCT-14 By: BA TB-ROX-101614-HCL						
MC34463-1	SW846 8260C	30-OCT-14 12:05	JM			V8260SL+
MC34463-2 Collected: 16-OCT-14 00:00 By: SVMM Received: 20-OCT-14 By: BA TB-ROX-101614-ST						
MC34463-2	SW846 8011	23-OCT-14 20:08	NK	21-OCT-14	FC	V8011SL
MC34463-3 Collected: 16-OCT-14 09:15 By: SVMM Received: 20-OCT-14 By: BA MW4-ROX-101614						
MC34463-3	SW846 8011	23-OCT-14 20:26	NK	21-OCT-14	FC	V8011SL
MC34463-3	SW846 8270D BY SIM	24-OCT-14 00:21	WK	21-OCT-14	AZ	B8270SIMSL
MC34463-3	SW846 8270D	24-OCT-14 10:44	MR	21-OCT-14	AZ	AB8270SL+
MC34463-3	SW846 8260C	30-OCT-14 12:36	JM			V8260SL+
MC34463-4 Collected: 16-OCT-14 10:50 By: SVMM Received: 20-OCT-14 By: BA MW8-ROX-101614						
MC34463-4	SW846 8011	23-OCT-14 20:44	NK	21-OCT-14	FC	V8011SL
MC34463-4	SW846 8270D BY SIM	24-OCT-14 00:44	WK	21-OCT-14	AZ	B8270SIMSL
MC34463-4	SW846 8270D	24-OCT-14 11:08	MR	21-OCT-14	AZ	AB8270SL+
MC34463-4	SW846 8260C	30-OCT-14 13:05	JM			V8260SL+
MC34463-4	SW846 8260C	30-OCT-14 19:09	JM			V8260SL+
MC34463-5 Collected: 16-OCT-14 13:30 By: SVMM Received: 20-OCT-14 By: BA MW7-ROX-101614						
MC34463-5	SW846 8011	23-OCT-14 21:02	NK	21-OCT-14	FC	V8011SL
MC34463-5	SW846 8270D BY SIM	24-OCT-14 01:06	WK	21-OCT-14	AZ	B8270SIMSL
MC34463-5	SW846 8270D	24-OCT-14 11:31	MR	21-OCT-14	AZ	AB8270SL+
MC34463-5	SW846 8260C	30-OCT-14 13:35	JM			V8260SL+
MC34463-6 Collected: 16-OCT-14 13:30 By: SVMM Received: 20-OCT-14 By: BA MW7-ROX-101614-DUP						
MC34463-6	SW846 8011	23-OCT-14 21:19	NK	21-OCT-14	FC	V8011SL
MC34463-6	SW846 8270D BY SIM	24-OCT-14 01:29	WK	21-OCT-14	AZ	B8270SIMSL

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34463

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34463-6	SW846 8270D	24-OCT-14 11:54	MR	21-OCT-14	AZ	AB8270SL+
MC34463-6	SW846 8260C	30-OCT-14 14:05	JM			V8260SL+

Accutest Internal Chain of Custody

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/20/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34463-1.2	VOC Ref #3	Jaime Maslowski	10/30/14 09:09	Retrieve from Storage
MC34463-1.2	Jaime Maslowski	GCMSP	10/30/14 09:09	Load on Instrument
MC34463-1.2	GCMSP	Jaime Maslowski	10/31/14 09:51	Unload from Instrument
MC34463-1.2	Jaime Maslowski	VOC Ref #3	10/31/14 09:52	Return to Storage
MC34463-2.1	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34463-3.1	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34463-3.1	Alireza Zeighami		10/21/14 16:33	Depleted
MC34463-3.2	Walk In Ref #22	Thomas Abruzzise	10/21/14 14:56	Retrieve from Storage
MC34463-3.2	Thomas Abruzzise	Walk In Ref #22	10/21/14 15:42	Return to Storage
MC34463-3.3	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34463-3.6	VOC Ref #3	Jaime Maslowski	10/30/14 09:09	Retrieve from Storage
MC34463-3.6	Jaime Maslowski	GCMSP	10/30/14 09:09	Load on Instrument
MC34463-3.6	GCMSP	Jaime Maslowski	10/31/14 09:51	Unload from Instrument
MC34463-3.6	Jaime Maslowski	VOC Ref #3	10/31/14 09:52	Return to Storage
MC34463-4.2	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34463-4.2	Alireza Zeighami		10/21/14 16:33	Depleted
MC34463-4.3	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34463-4.5	VOC Ref #3	Jaime Maslowski	10/30/14 09:09	Retrieve from Storage
MC34463-4.5	Jaime Maslowski	GCMSP	10/30/14 09:09	Load on Instrument
MC34463-4.5	GCMSP	Jaime Maslowski	10/31/14 09:51	Unload from Instrument
MC34463-4.5	Jaime Maslowski	VOC Ref #3	10/31/14 09:52	Return to Storage
MC34463-5.1	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34463-5.1	Alireza Zeighami		10/21/14 16:33	Depleted
MC34463-5.4	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage
MC34463-5.5	VOC Ref #3	Jaime Maslowski	10/30/14 09:09	Retrieve from Storage
MC34463-5.5	Jaime Maslowski	GCMSP	10/30/14 09:09	Load on Instrument
MC34463-5.5	GCMSP	Jaime Maslowski	10/31/14 09:51	Unload from Instrument
MC34463-5.5	Jaime Maslowski	VOC Ref #3	10/31/14 09:52	Return to Storage
MC34463-6.1	Walk In Ref #22	Alireza Zeighami	10/21/14 11:13	Retrieve from Storage
MC34463-6.1	Alireza Zeighami		10/21/14 16:33	Depleted
MC34463-6.4	VOC Ref #3	Marc Tahtamoni	10/21/14 14:43	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/20/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34463-6.6	VOC Ref #3	Jaime Maslowski	10/30/14 09:09	Retrieve from Storage
MC34463-6.6	Jaime Maslowski	GCMSP	10/30/14 09:09	Load on Instrument
MC34463-6.6	GCMSP	Jaime Maslowski	10/31/14 09:51	Unload from Instrument
MC34463-6.6	Jaime Maslowski	VOC Ref #3	10/31/14 09:52	Return to Storage

5.3

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: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-MB	P80930.D	1	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.32	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.57	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.34	ug/l	
75-25-2	Bromoform	ND	1.0	0.61	ug/l	
74-83-9	Bromomethane	ND	2.0	1.8	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.53	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.43	ug/l	
75-00-3	Chloroethane	ND	2.0	0.53	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.41	ug/l	
74-87-3	Chloromethane	ND	2.0	1.1	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.38	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.56	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.36	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.36	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.61	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-MB	P80930.D	1	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.28	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.85	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.40	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.59	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.46	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.45	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.47	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.38	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.58	ug/l	
	m,p-Xylene	ND	1.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.36	ug/l	

Method Blank Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-MB	P80930.D	1	10/30/14	JM	n/a	n/a	MSP2648

6.1.1

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-BS	P80928.D	1	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	44.3	89	70-130
107-02-8	Acrolein	250	204	82	70-130
107-13-1	Acrylonitrile	50	43.6	87	70-130
71-43-2	Benzene	50	51.8	104	70-130
108-86-1	Bromobenzene	50	50.6	101	70-130
74-97-5	Bromochloromethane	50	55.5	111	70-130
75-27-4	Bromodichloromethane	50	61.0	122	70-130
75-25-2	Bromoform	50	60.7	121	70-130
74-83-9	Bromomethane	50	48.2	96	70-130
78-93-3	2-Butanone (MEK)	50	37.3	75	70-130
104-51-8	n-Butylbenzene	50	52.0	104	70-130
135-98-8	sec-Butylbenzene	50	56.0	112	70-130
98-06-6	tert-Butylbenzene	50	51.1	102	70-130
75-15-0	Carbon disulfide	50	50.2	100	70-130
56-23-5	Carbon tetrachloride	50	64.6	129	70-130
108-90-7	Chlorobenzene	50	50.7	101	70-130
75-00-3	Chloroethane	50	59.8	120	70-130
110-75-8	2-Chloroethyl vinyl ether	50	66.2	132* a	70-130
67-66-3	Chloroform	50	53.4	107	70-130
74-87-3	Chloromethane	50	69.2	138* a	70-130
95-49-8	o-Chlorotoluene	50	49.9	100	70-130
106-43-4	p-Chlorotoluene	50	50.0	100	70-130
124-48-1	Dibromochloromethane	50	59.1	118	70-130
95-50-1	1,2-Dichlorobenzene	50	51.4	103	70-130
541-73-1	1,3-Dichlorobenzene	50	53.8	108	70-130
106-46-7	1,4-Dichlorobenzene	50	53.0	106	70-130
75-71-8	Dichlorodifluoromethane	50	54.7	109	70-130
75-34-3	1,1-Dichloroethane	50	57.6	115	70-130
107-06-2	1,2-Dichloroethane	50	54.2	108	70-130
75-35-4	1,1-Dichloroethene	50	53.2	106	70-130
156-59-2	cis-1,2-Dichloroethene	50	49.2	98	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	70-130
78-87-5	1,2-Dichloropropane	50	54.1	108	70-130
142-28-9	1,3-Dichloropropane	50	51.8	104	70-130
594-20-7	2,2-Dichloropropane	50	65.1	130	70-130
563-58-6	1,1-Dichloropropene	50	57.4	115	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-BS	P80928.D	1	10/30/14	JM	n/a	n/a	MSP2648

6.2.1

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.1	96	70-130
10061-02-6	trans-1,3-Dichloropropene	50	55.1	110	70-130
123-91-1	1,4-Dioxane	125	141	113	70-130
97-63-2	Ethyl methacrylate	50	46.6	93	77-137
100-41-4	Ethylbenzene	50	50.9	102	70-130
87-68-3	Hexachlorobutadiene	50	53.9	108	70-130
591-78-6	2-Hexanone	50	43.9	88	70-130
98-82-8	Isopropylbenzene	50	51.3	103	70-130
99-87-6	p-Isopropyltoluene	50	56.7	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	43.1	86	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.6	93	70-130
74-95-3	Methylene bromide	50	51.0	102	70-130
75-09-2	Methylene chloride	50	48.6	97	70-130
91-20-3	Naphthalene	50	64.8	130	70-130
103-65-1	n-Propylbenzene	50	53.3	107	70-130
100-42-5	Styrene	50	52.4	105	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.4	113	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	48.6	97	70-130
127-18-4	Tetrachloroethene	50	57.8	116	70-130
108-88-3	Toluene	50	51.3	103	70-130
87-61-6	1,2,3-Trichlorobenzene	50	33.4	67* a	70-130
120-82-1	1,2,4-Trichlorobenzene	50	49.3	99	70-130
71-55-6	1,1,1-Trichloroethane	50	61.1	122	70-130
79-00-5	1,1,2-Trichloroethane	50	52.5	105	70-130
79-01-6	Trichloroethene	50	54.7	109	70-130
75-69-4	Trichlorofluoromethane	50	50.3	101	70-130
96-18-4	1,2,3-Trichloropropane	50	48.3	97	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.0	110	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.9	106	70-130
108-05-4	Vinyl Acetate	50	34.3	69* a	70-130
75-01-4	Vinyl chloride	50	52.7	105	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	51.6	103	70-130
1330-20-7	Xylene (total)	150	154	103	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP2648-BS	P80928.D	1	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	81%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34463-3MS	P80949.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3MSD	P80950.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3	P80935.D	5	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	MC34463-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	145	58* a	250	137	55* a	6	70-130/30
107-02-8	Acrolein	ND		1250	967	77	1250	1020	82	5	70-130/30
107-13-1	Acrylonitrile	ND		250	216	86	250	209	84	3	70-130/30
71-43-2	Benzene	815		250	942	51* b	250	943	51* b	0	70-130/30
108-86-1	Bromobenzene	ND		250	245	98	250	252	101	3	70-130/30
74-97-5	Bromochloromethane	ND		250	251	100	250	257	103	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	307	123	250	312	125	2	70-130/30
75-25-2	Bromoform	ND		250	305	122	250	308	123	1	70-130/30
74-83-9	Bromomethane	ND		250	237	95	250	253	101	7	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	161	64* a	250	167	67* a	4	70-130/30
104-51-8	n-Butylbenzene	ND		250	237	95	250	255	102	7	70-130/30
135-98-8	sec-Butylbenzene	ND		250	271	108	250	282	113	4	70-130/30
98-06-6	tert-Butylbenzene	ND		250	251	100	250	259	104	3	70-130/30
75-15-0	Carbon disulfide	ND		250	244	98	250	249	100	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	319	128	250	319	128	0	70-130/30
108-90-7	Chlorobenzene	ND		250	253	101	250	254	102	0	70-130/30
75-00-3	Chloroethane	ND		250	293	117	250	292	117	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	385	154* c	250	379	152* c	2	70-130/30
67-66-3	Chloroform	ND		250	269	108	250	270	108	0	70-130/30
74-87-3	Chloromethane	ND		250	344	138* c	250	356	142* c	3	70-130/30
95-49-8	o-Chlorotoluene	ND		250	243	97	250	252	101	4	70-130/30
106-43-4	p-Chlorotoluene	ND		250	242	97	250	252	101	4	70-130/30
124-48-1	Dibromochloromethane	ND		250	294	118	250	299	120	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	244	98	250	257	103	5	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	256	102	250	269	108	5	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	252	101	250	265	106	5	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	258	103	250	263	105	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	287	115	250	292	117	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	275	110	250	283	113	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	272	109	250	269	108	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	254	102	250	255	102	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	253	101	250	260	104	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	272	109	250	274	110	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	259	104	250	264	106	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	329	132* a	250	335	134* a	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	293	117	250	294	118	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34463-3MS	P80949.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3MSD	P80950.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3	P80935.D	5	10/30/14	JM	n/a	n/a	MSP2648

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	MC34463-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	237	95	250	241	96	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	267	107	250	276	110	3	70-130/30
123-91-1	1,4-Dioxane	ND		625	559	89	625	632	101	12	70-130/30
97-63-2	Ethyl methacrylate	ND		250	231	92	250	240	96	4	72-139/30
100-41-4	Ethylbenzene	ND		250	257	103	250	257	103	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	241	96	250	253	101	5	70-130/30
591-78-6	2-Hexanone	ND		250	167	67* a	250	176	70	5	70-130/30
98-82-8	Isopropylbenzene	2.6	J	250	255	101	250	263	104	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	272	109	250	285	114	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	37.9		250	260	89	250	271	93	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	228	91	250	238	95	4	70-130/30
74-95-3	Methylene bromide	ND		250	255	102	250	262	105	3	70-130/30
75-09-2	Methylene chloride	ND		250	244	98	250	248	99	2	70-130/30
91-20-3	Naphthalene	ND		250	294	118	250	314	126	7	70-130/30
103-65-1	n-Propylbenzene	ND		250	262	105	250	271	108	3	70-130/30
100-42-5	Styrene	ND		250	259	104	250	261	104	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	283	113	250	284	114	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	238	95	250	247	99	4	70-130/30
127-18-4	Tetrachloroethene	ND		250	287	115	250	289	116	1	70-130/30
108-88-3	Toluene	ND		250	263	105	250	263	105	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	122	49* c	250	149	60* c	20	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	184	74	250	219	88	17	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	309	124	250	308	123	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	262	105	250	269	108	3	70-130/30
79-01-6	Trichloroethene	ND		250	270	108	250	275	110	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	242	97	250	242	97	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	235	94	250	244	98	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	3.7	J	250	267	105	250	278	110	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	257	103	250	265	106	3	70-130/30
108-05-4	Vinyl Acetate	ND		250	175	70	250	186	74	6	70-130/30
75-01-4	Vinyl chloride	ND		250	260	104	250	261	104	0	70-130/30
	m,p-Xylene	8.6		500	518	102	500	523	103	1	70-130/30
95-47-6	o-Xylene	2.2	J	250	259	103	250	261	104	1	70-130/30
1330-20-7	Xylene (total)	10.8		750	777	102	750	784	103	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34463-3MS	P80949.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3MSD	P80950.D	5	10/30/14	JM	n/a	n/a	MSP2648
MC34463-3	P80935.D	5	10/30/14	JM	n/a	n/a	MSP2648

6.3.1

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

MC34463-1, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Surrogate Recoveries	MS	MSD	MC34463-3	Limits
1868-53-7	Dibromofluoromethane	99%	98%	95%	70-130%
2037-26-5	Toluene-D8	103%	102%	103%	70-130%
460-00-4	4-Bromofluorobenzene	81%	82%	102%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSP2648-CC2633	Injection Date:	10/30/14
Lab File ID:	P80927.D	Injection Time:	08:36
Instrument ID:	GCMSP	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	781040	8.48	963369	9.32	481564	12.52	447575	15.08	116345	6.17
Upper Limit [a]	1562080	8.98	1926738	9.82	963128	13.02	895150	15.58	232690	6.67
Lower Limit [b]	390520	7.98	481685	8.82	240782	12.02	223788	14.58	58173	5.67
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP2648-BS	779078	8.48	973338	9.32	487755	12.52	457982	15.08	133283	6.16
MSP2648-MB	639955	8.48	807149	9.33	406700	12.53	294606	15.09	133888	6.20
ZZZZZZ	540465	8.48	667624	9.33	343374	12.53	240731	15.09	132875	6.21
ZZZZZZ	628292	8.48	783720	9.33	394072	12.53	274583	15.09	144968	6.19
ZZZZZZ	620285	8.48	772489	9.33	388808	12.53	270767	15.09	120232	6.20
MC34463-1	659884	8.48	815919	9.33	406363	12.53	275255	15.09	131284	6.20
MC34463-3	582213	8.48	727165	9.33	361850	12.53	262876	15.09	135572	6.19
MC34463-4	670142	8.48	838890	9.32	405682	12.53	273933	15.09	152108	6.19
MC34463-5	637569	8.48	788903	9.32	390955	12.53	259294	15.09	139792	6.19
MC34463-6	666377	8.48	828056	9.33	401984	12.53	270929	15.09	145685	6.19
GP18363-LB1	628870	8.48	785018	9.33	397898	12.53	289355	15.09	145926	6.18
ZZZZZZ	622699	8.48	765026	9.33	392045	12.53	276143	15.09	157740	6.19
GP18363-LS1	718270	8.48	888489	9.32	449218	12.53	445349	15.08	123700	6.16
ZZZZZZ	631185	8.48	784935	9.33	393607	12.53	297580	15.08	156506	6.19
ZZZZZZ	638764	8.48	794885	9.33	406741	12.53	287727	15.09	143763	6.19
ZZZZZZ	643388	8.48	788696	9.33	398833	12.53	277031	15.09	169994	6.19
ZZZZZZ	596071	8.48	751143	9.33	374179	12.53	246975	15.09	119555	6.21
GP18364-LS1	698315	8.48	865848	9.32	437294	12.53	426474	15.08	138769	6.16
MC34463-4	639197	8.48	800295	9.33	404064	12.53	305087	15.09	137142	6.19
MC34463-3MS	751542	8.48	937132	9.32	470956	12.53	448580	15.08	136912	6.17
MC34463-3MSD	758770	8.48	949103	9.32	476774	12.53	445276	15.08	137818	6.17

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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34463-1	P80934.D	94	105	108
MC34463-3	P80935.D	95	103	102
MC34463-4	P80948.D	96	105	98
MC34463-4	P80936.D	96	101	107
MC34463-5	P80937.D	94	103	108
MC34463-6	P80938.D	95	102	108
MC34463-3MS	P80949.D	99	103	81
MC34463-3MSD	P80950.D	98	102	82
MSP2648-BS	P80928.D	98	102	81
MSP2648-MB	P80930.D	96	104	102

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MB	F77013.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MB	F77013.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	51%	15-110%
4165-62-2	Phenol-d5	35%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	81%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	96%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

7.1.1

7

Method Blank Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-MB	I92423.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	81%	30-130%
1718-51-0	Terphenyl-d14	83%	30-130%

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-BS	F77014.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.5	35	30-130
95-57-8	2-Chlorophenol	50	38.9	78	30-130
59-50-7	4-Chloro-3-methyl phenol	50	37.7	75	30-130
120-83-2	2,4-Dichlorophenol	50	38.1	76	30-130
105-67-9	2,4-Dimethylphenol	50	32.3	65	30-130
51-28-5	2,4-Dinitrophenol	50	57.5	115	30-130
534-52-1	4,6-Dinitro-o-cresol	50	57.8	116	30-130
95-48-7	2-Methylphenol	50	34.5	69	30-130
	3&4-Methylphenol	100	63.2	63	30-130
88-75-5	2-Nitrophenol	50	39.8	80	30-130
100-02-7	4-Nitrophenol	50	14.2	28* a	30-130
87-86-5	Pentachlorophenol	50	37.8	76	30-130
108-95-2	Phenol	50	14.9	30	30-130
95-95-4	2,4,5-Trichlorophenol	50	35.8	72	30-130
88-06-2	2,4,6-Trichlorophenol	50	38.2	76	30-130
62-53-3	Aniline	50	28.8	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	42.7	85	40-140
85-68-7	Butyl benzyl phthalate	50	49.6	99	40-140
100-51-6	Benzyl Alcohol	50	24.1	48	40-140
91-58-7	2-Chloronaphthalene	50	42.6	85	40-140
106-47-8	4-Chloroaniline	50	34.6	69	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	39.2	78	40-140
111-44-4	bis(2-Chloroethyl)ether	50	41.2	82	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	53.9	108	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	38.6	77	40-140
122-66-7	1,2-Diphenylhydrazine	50	43.1	86	40-140
121-14-2	2,4-Dinitrotoluene	50	45.9	92	40-140
606-20-2	2,6-Dinitrotoluene	50	45.8	92	40-140
91-94-1	3,3'-Dichlorobenzidine	50	54.2	108	40-140
132-64-9	Dibenzofuran	50	38.5	77	40-140
84-74-2	Di-n-butyl phthalate	50	43.6	87	40-140
117-84-0	Di-n-octyl phthalate	50	45.2	90	40-140
84-66-2	Diethyl phthalate	50	41.3	83	40-140
131-11-3	Dimethyl phthalate	50	42.6	85	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	51.6	103	40-140
118-74-1	Hexachlorobenzene	50	41.2	82	40-140

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-BS	F77014.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	23.5	47	40-140
67-72-1	Hexachloroethane	50	30.1	60	40-140
78-59-1	Isophorone	50	36.8	74	40-140
88-74-4	2-Nitroaniline	50	44.5	89	40-140
99-09-2	3-Nitroaniline	50	40.2	80	40-140
100-01-6	4-Nitroaniline	50	39.9	80	40-140
98-95-3	Nitrobenzene	50	38.8	78	40-140
62-75-9	n-Nitrosodimethylamine	50	30.0	60	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	43.6	87	40-140
86-30-6	N-Nitrosodiphenylamine	50	41.4	83	40-140
110-86-1	Pyridine	50	13.8	28* a	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	78%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	90%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

7

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-BS	I92424.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	40.8	82	40-140
208-96-8	Acenaphthylene	50	35.4	71	40-140
120-12-7	Anthracene	50	42.0	84	40-140
56-55-3	Benzo(a)anthracene	50	48.1	96	40-140
50-32-8	Benzo(a)pyrene	50	45.9	92	40-140
205-99-2	Benzo(b)fluoranthene	50	49.4	99	40-140
191-24-2	Benzo(g,h,i)perylene	50	46.2	92	40-140
207-08-9	Benzo(k)fluoranthene	50	42.0	84	40-140
218-01-9	Chrysene	50	43.7	87	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.7	93	40-140
206-44-0	Fluoranthene	50	38.8	78	40-140
86-73-7	Fluorene	50	48.2	96	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	38.1	76	40-140
91-57-6	2-Methylnaphthalene	50	39.0	78	40-140
85-01-8	Phenanthrene	50	42.9	86	40-140
129-00-0	Pyrene	50	37.8	76	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	80%	30-130%
1718-51-0	Terphenyl-d14	81%	30-130%

* = Outside of Control Limits.

7.2.2

7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MS	F77015.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
OP40299-MSD	F77016.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
MC34100-11	R40554.D	1	10/27/14	KD	10/21/14	OP40299	MSR1493

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	MC34100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	17.2	34	50	16.8	34	2	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.8	74	50	34.6	69	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	37.8	76	50	36.2	72	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	37.6	75	50	35.4	71	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	31.5	63	50	28.1	56	11	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	60.0	120	50	60.1	120	0	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	56.2	112	50	58.3	117	4	30-130/20
95-48-7	2-Methylphenol	ND		50	32.8	66	50	29.9	60	9	30-130/20
	3&4-Methylphenol	ND		100	61.6	62	100	58.0	58	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	39.2	78	50	37.3	75	5	30-130/20
100-02-7	4-Nitrophenol	ND		50	13.7	27* [a]	50	13.8	28* [a]	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	37.0	74	50	37.3	75	1	30-130/20
108-95-2	Phenol	ND		50	14.4	29* [a]	50	13.8	28* [a]	4	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	35.8	72	50	33.4	67	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	36.8	74	50	36.7	73	0	30-130/20
62-53-3	Aniline	ND		50	24.6	49	50	22.8	46	8	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	41.8	84	50	42.7	85	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	49.4	99	50	49.6	99	0	40-140/20
100-51-6	Benzyl Alcohol	ND		50	25.1	50	50	22.4	45	11	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	42.4	85	50	40.9	82	4	40-140/20
106-47-8	4-Chloroaniline	ND		50	34.4	69	50	32.9	66	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	39.0	78	50	36.1	72	8	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	41.1	82	50	37.6	75	9	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	53.0	106	50	49.6	99	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	38.3	77	50	38.3	77	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	42.8	86	50	43.3	87	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	45.4	91	50	45.1	90	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	46.2	92	50	45.0	90	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	54.4	109	50	52.8	106	3	40-140/20
132-64-9	Dibenzofuran	ND		50	38.4	77	50	37.7	75	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	43.5	87	50	43.3	87	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	44.2	88	50	44.6	89	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	41.3	83	50	41.1	82	0	40-140/20
131-11-3	Dimethyl phthalate	ND		50	42.1	84	50	42.2	84	0	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	51.7	103	50	51.8	104	0	40-140/20
118-74-1	Hexachlorobenzene	ND		50	40.6	81	50	41.0	82	1	40-140/20

* = Outside of Control Limits.

7.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40299-MS	F77015.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
OP40299-MSD	F77016.D	1	10/24/14	MR	10/21/14	OP40299	MSF3374
MC34100-11	R40554.D	1	10/27/14	KD	10/21/14	OP40299	MSR1493

The QC reported here applies to the following samples: Method: SW846 8270D

MC34463-3, MC34463-4, MC34463-5, MC34463-6

7.3.1

CAS No.	Compound	MC34100-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	23.3	47	50	21.6	43	8	40-140/20
67-72-1	Hexachloroethane	ND		50	30.9	62	50	29.6	59	4	40-140/20
78-59-1	Isophorone	ND		50	36.5	73	50	34.6	69	5	40-140/20
88-74-4	2-Nitroaniline	ND		50	43.9	88	50	44.1	88	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.8	82	50	40.2	80	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	40.6	81	50	39.4	79	3	40-140/20
98-95-3	Nitrobenzene	ND		50	38.8	78	50	36.2	72	7	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	30.4	61	50	27.6	55	10	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.3	87	50	40.6	81	6	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.5	81	50	41.2	82	2	40-140/20
110-86-1	Pyridine	ND		50	11.9	24* [a]	50	9.5	19* [a]	22* [b]	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-11 Limits	
367-12-4	2-Fluorophenol	47%	43%	51%	15-110%
4165-62-2	Phenol-d5	33%	28%	32%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	93%	105%	15-110%
4165-60-0	Nitrobenzene-d5	79%	73%	82%	30-130%
321-60-8	2-Fluorobiphenyl	75%	71%	85%	30-130%
1718-51-0	Terphenyl-d14	89%	90%	95%	30-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample heterogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40300-MS	I92425.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445
OP40300-MSD	I92426.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445
MC34100-12	I92427.D	1	10/23/14	WK	10/21/14	OP40300	MSI3445

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34463-3, MC34463-4, MC34463-5, MC34463-6

7.3.2

7

CAS No.	Compound	MC34100-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.4	81	50	40.0	80	1	40-140/20
208-96-8	Acenaphthylene	ND		50	35.5	71	50	34.9	70	2	40-140/20
120-12-7	Anthracene	ND		50	42.4	85	50	42.1	84	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	47.6	95	50	47.3	95	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	44.9	90	50	44.7	89	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	45.1	90	50	50.0	100	10	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	45.5	91	50	45.3	91	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	39.5	79	50	40.3	81	2	40-140/20
218-01-9	Chrysene	ND		50	44.0	88	50	43.6	87	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.1	92	50	45.5	91	1	40-140/20
206-44-0	Fluoranthene	ND		50	39.7	79	50	39.0	78	2	40-140/20
86-73-7	Fluorene	ND		50	47.6	95	50	48.1	96	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.0	90	50	44.7	89	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	38.5	77	50	37.2	74	3	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	38.8	78	50	37.1	74	4	40-140/20
85-01-8	Phenanthrene	ND		50	43.6	87	50	43.9	88	1	40-140/20
129-00-0	Pyrene	ND		50	38.4	77	50	37.9	76	1	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-12	Limits
4165-60-0	Nitrobenzene-d5	84%	78%	77%	30-130%
321-60-8	2-Fluorobiphenyl	79%	75%	72%	30-130%
1718-51-0	Terphenyl-d14	82%	81%	76%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3374-CC3361	Injection Date:	10/24/14
Lab File ID:	F77012.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	80351	4.14	268321	5.19	174204	6.72	314738	8.00	396524	10.57	383698	12.27
Upper Limit [a]	160702	4.64	536642	5.69	348408	7.22	629476	8.50	793048	11.07	767396	12.77
Lower Limit [b]	40176	3.64	134161	4.69	87102	6.22	157369	7.50	198262	10.07	191849	11.77
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40299-MB	90931	4.14	316725	5.19	203417	6.72	387270	8.00	454373	10.56	445536	12.27
OP40299-BS	87440	4.14	308603	5.19	197061	6.72	366496	8.00	461227	10.57	439548	12.27
OP40299-MS	82458	4.14	289463	5.19	186365	6.72	353436	8.00	440524	10.57	420636	12.27
OP40299-MSD	86127	4.14	299261	5.19	192367	6.72	354781	8.00	436867	10.57	420358	12.27
MC34463-3	81206	4.14	275345	5.19	186349	6.72	356089	8.00	437086	10.57	429373	12.27
MC34463-4	103572	4.14	372561	5.19	240380	6.72	462925	8.00	586739	10.57	583854	12.28
MC34463-5	85272	4.14	296589	5.19	195859	6.72	365005	8.00	424462	10.57	416597	12.27
MC34463-6	85397	4.14	290696	5.19	189975	6.72	360204	8.00	423550	10.57	414730	12.27
ZZZZZZ	79965	4.14	287719	5.19	195895	6.72	380569	8.00	476031	10.57	478953	12.28
ZZZZZZ	80497	4.14	282748	5.19	188113	6.72	356583	8.00	432675	10.57	423992	12.27
ZZZZZZ	74255	4.14	254909	5.19	171761	6.72	335050	8.00	404844	10.57	390244	12.27
ZZZZZZ	76499	4.14	266435	5.19	179984	6.72	347229	8.00	424444	10.57	411451	12.27
ZZZZZZ	73607	4.14	257296	5.19	170422	6.72	333745	8.00	406301	10.57	398241	12.27
OP40329-MB	81892	4.14	274909	5.19	177974	6.72	329537	8.00	367511	10.57	341893	12.27
OP40329-BS	75472	4.14	266061	5.19	165865	6.72	296548	8.00	350600	10.57	331989	12.27
OP40329-MS	80456	4.14	284813	5.19	181355	6.72	335061	8.00	395829	10.57	362712	12.27
OP40329-MSD	85934	4.14	299585	5.19	186055	6.72	345612	8.00	392524	10.57	357971	12.27
MC34536-1	92224	4.14	312217	5.19	205154	6.72	380992	8.00	418408	10.57	388879	12.27
ZZZZZZ	83760	4.14	286780	5.19	183594	6.71	344862	8.00	377271	10.57	350812	12.27
ZZZZZZ	75364	4.14	261041	5.19	171397	6.72	322913	8.00	363766	10.57	338701	12.27
ZZZZZZ	79711	4.14	270484	5.19	174144	6.71	323424	8.00	362206	10.57	337244	12.27
ZZZZZZ	65063	4.14	224164	5.19	146930	6.72	282926	8.00	341006	10.57	331397	12.27
ZZZZZZ	66895	4.14	224244	5.19	144374	6.71	269930	8.00	342328	10.57	370291	12.27
ZZZZZZ	76943	4.14	262613	5.19	167113	6.71	310107	8.00	356554	10.57	361585	12.27
ZZZZZZ	71557	4.14	242246	5.19	152362	6.72	285746	8.00	338012	10.57	350376	12.27
ZZZZZZ	62966	4.14	219082	5.19	145315	6.72	283055	8.00	361554	10.57	367425	12.27

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

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

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3374-CC3361	Injection Date:	10/24/14
Lab File ID:	F77012.D	Injection Time:	08:26
Instrument ID:	GCMSF	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

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

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	279383	2.82	644600	3.84	373968	5.33	667028	6.57	610503	9.22	1064015	10.60
Upper Limit [a]	558766	3.32	1289200	4.34	747936	5.83	1334056	7.07	1221006	9.72	2128030	11.10
Lower Limit [b]	139692	2.32	322300	3.34	186984	4.83	333514	6.07	305252	8.72	532008	10.10

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	345815	2.82	778436	3.84	446372	5.33	791302	6.56	742193	9.22	1298288	10.60
ZZZZZZ	363516	2.82	824379	3.84	475419	5.33	850212	6.56	788775	9.22	1405118	10.60
ZZZZZZ	370348	2.82	823010	3.84	479455	5.33	862229	6.56	793486	9.22	1402664	10.60
ZZZZZZ	357647	2.82	795387	3.84	459926	5.33	826344	6.56	768946	9.22	1354885	10.60
ZZZZZZ	372445	2.83	842079	3.84	471336	5.33	838194	6.56	783493	9.22	1378762	10.60
ZZZZZZ	296387	2.82	650642	3.84	371890	5.34	674648	6.58	655222	9.22	1133480	10.60
ZZZZZZ	286316	2.82	642932	3.84	369235	5.33	680381	6.57	645629	9.22	1132926	10.60
ZZZZZZ	380327	2.82	844664	3.84	512481	5.33	878012	6.57	833620	9.23	1471264	10.61
ZZZZZZ	407752	2.82	943127	3.84	620571	5.33	933287	6.57	878512	9.23	1553982	10.61
ZZZZZZ	470653	2.82	1052429	3.84	601258	5.33	1054930	6.57	993558	9.23	1726372	10.61
ZZZZZZ	423414	2.82	938563	3.84	543234	5.33	971918	6.57	909071	9.22	1607591	10.61
ZZZZZZ	312339	2.82	723215	3.84	435193	5.33	735569	6.57	682459	9.22	1204095	10.60
OP40300-MB	319266	2.82	732475	3.84	425924	5.32	765587	6.56	721184	9.22	1257918	10.60
OP40300-BS	319395	2.82	750006	3.84	431900	5.33	775143	6.57	712113	9.23	1238057	10.61
OP40300-MS	325093	2.82	760237	3.84	435680	5.33	763554	6.57	691922	9.23	1204406	10.61
OP40300-MSD	317579	2.82	748522	3.84	430819	5.33	772804	6.57	708264	9.23	1228215	10.61
MC34100-12	368639	2.82	831476	3.84	486004	5.33	880745	6.56	830938	9.22	1478734	10.60
ZZZZZZ	284575	2.82	653275	3.84	378182	5.32	674780	6.56	635914	9.22	1132721	10.60
ZZZZZZ	294345	2.82	664385	3.84	387325	5.32	692835	6.56	645517	9.22	1141928	10.60
ZZZZZZ	294767	2.82	670247	3.84	388334	5.32	688858	6.56	653406	9.22	1166095	10.60
ZZZZZZ	302286	2.82	693596	3.84	398757	5.33	705186	6.56	663393	9.22	1166299	10.60
ZZZZZZ	306751	2.82	705808	3.84	400579	5.33	713274	6.56	667256	9.22	1176538	10.60
ZZZZZZ	284513	2.82	657137	3.84	379123	5.32	664806	6.56	637403	9.22	1129211	10.60
MC34463-3	310570	2.82	708592	3.84	409978	5.32	719365	6.56	683768	9.22	1211366	10.60
MC34463-4	363327	2.82	850361	3.84	479960	5.33	843509	6.57	785140	9.23	1338912	10.61
MC34463-5	321941	2.83	746862	3.84	424023	5.33	761960	6.56	682489	9.22	1179102	10.60
MC34463-6	326469	2.82	754969	3.84	432339	5.33	764262	6.56	685648	9.22	1180768	10.60
ZZZZZZ	326914	2.82	745052	3.84	428650	5.33	769185	6.57	715706	9.23	1235310	10.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3445-CC3427	Injection Date:	10/23/14
Lab File ID:	I92408.D	Injection Time:	14:32
Instrument ID:	GCMS1	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34463-3	F77018.D	54	39	91	83	75	93
MC34463-4	F77019.D	49	35	89	82	73	87
MC34463-5	F77020.D	55	40	96	85	76	97
MC34463-6	F77021.D	45	34	91	75	73	91
OP40299-BS	F77014.D	49	33	91	78	76	90
OP40299-MB	F77013.D	51	35	92	81	78	96
OP40299-MS	F77015.D	47	33	90	79	75	89
OP40299-MSD	F77016.D	43	28	93	73	71	90

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

Semivolatile Surrogate Recovery Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34463-3	I92434.D	87	77	82
MC34463-4	I92435.D	81	76	80
MC34463-5	I92436.D	86	79	85
MC34463-6	I92437.D	77	75	83
OP40300-BS	I92424.D	85	80	81
OP40300-MB	I92423.D	87	81	83
OP40300-MS	I92425.D	84	79	82
OP40300-MSD	I92426.D	78	75	81

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

7.5.2

7

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GC Volatiles

QC Data Summaries

8

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MB	BB60044.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34463-2, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	69%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-BS	BB60045.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34463-2, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.075	106	60-140
106-93-4	1,2-Dibromoethane	0.071	0.076	107	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	75%	36-173%
460-00-4	Bromofluorobenzene (S)	77%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40305-MS	BB60046.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
OP40305-MSD	BB60047.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339
MC34100-13	BB60048.D	1	10/23/14	NK	10/21/14	OP40305	GBB3339

The QC reported here applies to the following samples: Method: SW846 8011

MC34463-2, MC34463-3, MC34463-4, MC34463-5, MC34463-6

CAS No.	Compound	MC34100-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.082	115	0.071	0.075	106	9	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.075	106	0.071	0.077	108	3	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34100-13 Limits
460-00-4	Bromofluorobenzene (S)	83%	73%	71% 36-173%
460-00-4	Bromofluorobenzene (S)	87%	74%	74% 36-173%

* = Outside of Control Limits.

8.3.1

8

Volatile Surrogate Recovery Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34463-2	BB60059.D	66	73
MC34463-3	BB60060.D	67	97
MC34463-4	BB60061.D	70	77
MC34463-5	BB60062.D	67	83
MC34463-6	BB60063.D	69	86
OP40305-BS	BB60045.D	75	77
OP40305-MB	BB60044.D	69	71
OP40305-MS	BB60046.D	83	87
OP40305-MSD	BB60047.D	73	74

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-ICC3339	Injection Date:	10/23/14
Lab File ID:	BB60040.D	Injection Time:	14:08
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40305-MB	BB60044.D	10/23/14	15:39	3.32	3.33
OP40306-MB	BB60044A.D	10/23/14	15:39	3.32	3.33
OP40306-BS	BB60045A.D	10/23/14	15:57	3.32	3.33
OP40305-BS	BB60045.D	10/23/14	15:57	3.32	3.33
OP40305-MS	BB60046.D	10/23/14	16:15	3.33	3.33
OP40305-MSD	BB60047.D	10/23/14	16:33	3.32	3.33
MC34100-13	BB60048.D	10/23/14	16:51	3.32	3.33
ZZZZZZ	BB60049.D	10/23/14	17:09	3.32	3.33
ZZZZZZ	BB60050.D	10/23/14	17:27	3.32	3.33
ZZZZZZ	BB60051.D	10/23/14	17:45	3.33	3.33
ZZZZZZ	BB60052.D	10/23/14	18:03	3.32	3.33
ZZZZZZ	BB60053.D	10/23/14	18:21	3.33	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34463
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3339-CC3339	Injection Date:	10/23/14
Lab File ID:	BB60054.D	Injection Time:	18:38
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB60055.D	10/23/14	18:56	3.32	3.33
ZZZZZZ	BB60056.D	10/23/14	19:14	3.32	3.33
ZZZZZZ	BB60057.D	10/23/14	19:32	3.32	3.33
ZZZZZZ	BB60058.D	10/23/14	19:50	3.32	3.33
MC34463-2	BB60059.D	10/23/14	20:08	3.32	3.33
MC34463-3	BB60060.D	10/23/14	20:26	3.32	3.33
MC34463-4	BB60061.D	10/23/14	20:44	3.33	3.33
MC34463-5	BB60062.D	10/23/14	21:02	3.33	3.34
MC34463-6	BB60063.D	10/23/14	21:19	3.33	3.33
ZZZZZZ	BB60064.D	10/23/14	21:37	3.32	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34553

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/18/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
MW28-ROX-102114	MW27-ROX-102114
MW26-ROX-102114	MW25-ROX-102114
TB-ROX-102114-HCL	TB-ROX-102114-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC and SVOC LCS recoveries were outside evaluation criteria. Sample MW25-ROX-102114 was diluted due to high levels of VOCs. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for 4-chloroaniline exceeded 30 percent difference (%D).

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.7ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSN3393-BS	VOCs	2-Butanone (MEK)	**131**	70-130
MSN3393-BS	VOCs	Carbon disulfide	**134**	70-130

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
OP40382-BS	SVOCs	Benzoic acid	**23**	70-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Sample ID	Parameter	Analyte	Qualification
MW28-ROX-102114	SVOCs	Benzoic acid	**UJ**
MW27-ROX-102114	SVOCs	Benzoic acid	**UJ**
MW26-ROX-102114	SVOCs	Benzoic acid	**UJ**
MW25-ROX-102114	SVOCs	Benzoic acid	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

No

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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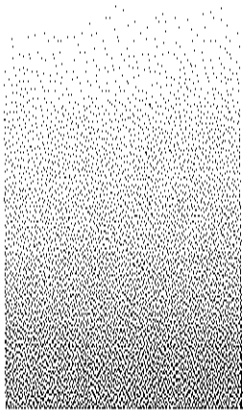
11/10/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34553

Sampling Date: 10/21/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **81**

Reviewed on 11/18/14

Reza Tand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

Shell Oil

Job No: MC34553

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34553-1	10/21/14	11:25	LRCW	10/23/14	AQ	Ground Water	MW28-ROX-102114
MC34553-2	10/21/14	13:25	LRCW	10/23/14	AQ	Ground Water	MW27-ROX-102114
MC34553-3	10/21/14	14:45	LRCW	10/23/14	AQ	Ground Water	MW26-ROX-102114
MC34553-4	10/21/14	16:00	LRCW	10/23/14	AQ	Ground Water	MW25-ROX-102114
MC34553-5	10/21/14	00:00	LRCW	10/23/14	AQ	Trip Blank Water	TB-ROX-102114-HCL
MC34553-6	10/21/14	00:00	LRCW	10/23/14	AQ	Trip Blank Water	TB-ROX-102114-ST

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC34553
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	**Report Date**	11/6/2014 1:59:05 PM

4 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 10/21/2014 and were received at Accutest on 10/23/2014 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of MC34553. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix: AQ	Batch ID: MSN3393

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC34589-1MS, MC34589-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSN3393-BS for 2-Butanone (MEK), Carbon disulfide are outside control limits. Blank Spike meets program technical requirements.
- MC34589-1MS/MSD for 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethene, Acetone, Carbon disulfide, Chloroethane are outside control limits due to possible matrix interference. Refer to Blank Spike.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP40382

- 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.
- Sample(s) MC34200-6MS, MC34200-6MSD were used as the QC samples indicated.
- OP40382-BS, OP40382-MS/MSD for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- Initial calibration verification MSF3361-ICV3361 for 4-Chloroaniline exceeds 30% Difference. 4-Chloroaniline is within criteria in continuing calibration check MSF3381-CC3361.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP40383

- 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.
- Sample(s) MC34200-7MS, MC34200-7MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP40406

- 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.
- Sample(s) MC34200-11MS, MC34200-11MSD were used as the QC samples indicated.
- OP40406-MS/MSD for 1,2-Dibromo-3-chloropropane are outside control limits due to possible matrix interference.

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(MC34553).

Summary of Hits

Job Number: MC34553
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 10/21/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34553-1	MW28-ROX-102114					
Benzene		8.1	0.50	0.25	ug/l	SW846 8260C
sec-Butylbenzene		0.83 J	5.0	0.42	ug/l	SW846 8260C
Isopropylbenzene		0.75 J	5.0	0.35	ug/l	SW846 8260C
p-Isopropyltoluene		0.49 J	5.0	0.37	ug/l	SW846 8260C
Toluene		1.1	1.0	0.22	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		3.6 J	5.0	0.30	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		0.59 J	5.0	0.18	ug/l	SW846 8260C
m,p-Xylene		3.6	1.0	0.38	ug/l	SW846 8260C
o-Xylene		5.1	1.0	0.30	ug/l	SW846 8260C
Xylene (total)		8.7	1.0	0.30	ug/l	SW846 8260C
Di-n-butyl phthalate		0.26 J	5.3	0.18	ug/l	SW846 8270D
1-Methylnaphthalene		0.75 J	2.1	0.53	ug/l	SW846 8270D BY SIM
Phenanthrene		0.017 J	0.053	0.013	ug/l	SW846 8270D BY SIM
MC34553-2	MW27-ROX-102114					
Benzene		0.33 J	0.50	0.25	ug/l	SW846 8260C
MC34553-3	MW26-ROX-102114					
Methyl Tert Butyl Ether		2.0	1.0	0.22	ug/l	SW846 8260C
MC34553-4	MW25-ROX-102114					
Benzene		501000	1000	500	ug/l	SW846 8260C
Toluene		2650	2000	440	ug/l	SW846 8260C
Xylene (total)		753 J	2000	610	ug/l	SW846 8260C
2,4-Dimethylphenol		2.5 J	11	0.62	ug/l	SW846 8270D
2-Methylphenol		1.1 J	11	0.25	ug/l	SW846 8270D
3&4-Methylphenol		2.8 J	11	0.52	ug/l	SW846 8270D
Phenol		173	5.6	0.34	ug/l	SW846 8270D
1-Methylnaphthalene		0.93 J	2.2	0.56	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.57 J	2.2	0.56	ug/l	SW846 8270D BY SIM
Phenanthrene		0.033 J	0.056	0.014	ug/l	SW846 8270D BY SIM
MC34553-5	TB-ROX-102114-HCL					
No hits reported in this sample.						
MC34553-6	TB-ROX-102114-ST					
No hits reported in this sample.						

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91833.D	1	11/04/14	JB	n/a	n/a	MSN3393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	8.1	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	0.83	5.0	0.42	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	0.75	5.0	0.35	ug/l	J
99-87-6	p-Isopropyltoluene	0.49	5.0	0.37	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	1.1	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	3.6	5.0	0.30	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	0.59	5.0	0.18	ug/l	J
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	3.6	1.0	0.38	ug/l	
95-47-6	o-Xylene	5.1	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	8.7	1.0	0.30	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40741.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.6	ug/l	U5
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.87	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.59	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.0	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.49	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.0	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.56	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.18	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.25	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.48	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.27	ug/l	
84-74-2	Di-n-butyl phthalate	0.26	5.3	0.18	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

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Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.41	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.42	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.20	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	105%		15-110%
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	80%		30-130%
1718-51-0	Terphenyl-d14	98%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92613.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	0.75	2.1	0.53	ug/l	J
91-57-6	2-Methylnaphthalene	ND	2.1	0.53	ug/l	
85-01-8	Phenanthrene	0.017	0.053	0.013	ug/l	J
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	89%		30-130%
321-60-8	2-Fluorobiphenyl	77%		30-130%
1718-51-0	Terphenyl-d14	84%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW28-ROX-102114		
Lab Sample ID:	MC34553-1	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60085.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	88%		36-173%
460-00-4	Bromofluorobenzene (S)	112%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91834.D	1	11/04/14	JB	n/a	n/a	MSN3393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	0.33	0.50	0.25	ug/l	J
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

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Report of Analysis

Client Sample ID:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77206.D	1	10/31/14	MR	10/26/14	OP40382	MSF3381
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	U5
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.88	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92614.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.098	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.034	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.033	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	0.53	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.041	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	81%		30-130%

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW27-ROX-102114		
Lab Sample ID:	MC34553-2	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60086.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
Run #2							

	Initial Volume	Final Volume
Run #1	37.0 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	109%		36-173%
460-00-4	Bromofluorobenzene (S)	112%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91835.D	1	11/04/14	JB	n/a	n/a	MSN3393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77207.D	1	10/31/14	MR	10/26/14	OP40382	MSF3381
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.7	ug/l	U5
95-57-8	2-Chlorophenol	ND	5.3	0.33	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.88	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.42	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	0.60	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	ND	11	0.24	ug/l	
	3&4-Methylphenol	ND	11	0.50	ug/l	
88-75-5	2-Nitrophenol	ND	11	3.1	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.57	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	ND	5.3	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.39	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.50	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.56	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.4	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.33	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.59	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.30	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.37	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.35	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.27	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.26	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.49	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.32	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.28	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.28	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.18	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

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ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.3	0.21	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.36	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.35	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.32	ug/l	
78-59-1	Isophorone	ND	5.3	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.42	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.3	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.42	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.43	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.55	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	57%		30-130%
321-60-8	2-Fluorobiphenyl	49%		30-130%
1718-51-0	Terphenyl-d14	85%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92615.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.052	ug/l	
120-12-7	Anthracene	ND	0.11	0.097	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.053	0.021	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.053	0.033	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.028	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	ND	0.11	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.034	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.043	ug/l	
86-73-7	Fluorene	ND	0.11	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.032	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.1	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.1	0.53	ug/l	
85-01-8	Phenanthrene	ND	0.053	0.013	ug/l	
129-00-0	Pyrene	ND	0.11	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		30-130%
321-60-8	2-Fluorobiphenyl	56%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW26-ROX-102114		
Lab Sample ID:	MC34553-3	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60087.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
Run #2							

	Initial Volume	Final Volume
Run #1	36.2 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	110%		36-173%
460-00-4	Bromofluorobenzene (S)	110%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91836.D	2000	11/04/14	JB	n/a	n/a	MSN3393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20000	5000	ug/l	
107-02-8	Acrolein	ND	50000	12000	ug/l	
107-13-1	Acrylonitrile	ND	10000	4200	ug/l	
71-43-2	Benzene	501000	1000	500	ug/l	
108-86-1	Bromobenzene	ND	10000	700	ug/l	
74-97-5	Bromochloromethane	ND	10000	830	ug/l	
75-27-4	Bromodichloromethane	ND	2000	940	ug/l	
75-25-2	Bromoform	ND	2000	610	ug/l	
74-83-9	Bromomethane	ND	4000	1500	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	5000	ug/l	
104-51-8	n-Butylbenzene	ND	10000	2200	ug/l	
135-98-8	sec-Butylbenzene	ND	10000	840	ug/l	
98-06-6	tert-Butylbenzene	ND	10000	780	ug/l	
75-15-0	Carbon disulfide	ND	10000	920	ug/l	
56-23-5	Carbon tetrachloride	ND	2000	460	ug/l	
108-90-7	Chlorobenzene	ND	2000	500	ug/l	
75-00-3	Chloroethane	ND	4000	740	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10000	6600	ug/l	
67-66-3	Chloroform	ND	2000	620	ug/l	
74-87-3	Chloromethane	ND	4000	1200	ug/l	
95-49-8	o-Chlorotoluene	ND	10000	760	ug/l	
106-43-4	p-Chlorotoluene	ND	10000	900	ug/l	
124-48-1	Dibromochloromethane	ND	2000	520	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	480	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	310	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	620	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1400	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	390	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	670	ug/l	
75-35-4	1,1-Dichloroethene	ND	2000	590	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2000	880	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2000	940	ug/l	

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Report of Analysis

Client Sample ID:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	4000	890	ug/l	
142-28-9	1,3-Dichloropropane	ND	10000	1800	ug/l	
594-20-7	2,2-Dichloropropane	ND	10000	2500	ug/l	
563-58-6	1,1-Dichloropropene	ND	10000	950	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1000	830	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1000	770	ug/l	
123-91-1	1,4-Dioxane	ND	50000	22000	ug/l	
97-63-2	Ethyl methacrylate	ND	10000	1000	ug/l	
100-41-4	Ethylbenzene	ND	2000	500	ug/l	
87-68-3	Hexachlorobutadiene	ND	10000	3300	ug/l	
591-78-6	2-Hexanone	ND	10000	3200	ug/l	
98-82-8	Isopropylbenzene	ND	10000	700	ug/l	
99-87-6	p-Isopropyltoluene	ND	10000	750	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	430	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
74-95-3	Methylene bromide	ND	10000	1000	ug/l	
75-09-2	Methylene chloride	ND	4000	780	ug/l	
91-20-3	Naphthalene	ND	10000	1400	ug/l	
103-65-1	n-Propylbenzene	ND	10000	980	ug/l	
100-42-5	Styrene	ND	10000	590	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2000	870	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	590	ug/l	
127-18-4	Tetrachloroethene	ND	2000	580	ug/l	
108-88-3	Toluene	2650	2000	440	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10000	1400	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10000	370	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	840	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	590	ug/l	
79-01-6	Trichloroethene	ND	2000	800	ug/l	
75-69-4	Trichlorofluoromethane	ND	2000	1100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10000	1600	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10000	600	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10000	360	ug/l	
108-05-4	Vinyl Acetate	ND	10000	1400	ug/l	
75-01-4	Vinyl chloride	ND	2000	890	ug/l	
	m,p-Xylene	ND	2000	770	ug/l	
95-47-6	o-Xylene	ND	2000	610	ug/l	
1330-20-7	Xylene (total)	753	2000	610	ug/l	J

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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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	108%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F77208.D	1	10/31/14	MR	10/26/14	OP40382	MSF3381
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	2.8	ug/l	U5
95-57-8	2-Chlorophenol	ND	5.6	0.34	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.92	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.44	ug/l	
105-67-9	2,4-Dimethylphenol	2.5	11	0.62	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	22	2.8	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	2.1	ug/l	
95-48-7	2-Methylphenol	1.1	11	0.25	ug/l	J
	3&4-Methylphenol	2.8	11	0.52	ug/l	J
88-75-5	2-Nitrophenol	ND	11	3.2	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.2	ug/l	
108-95-2	Phenol	173	5.6	0.34	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.41	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.19	ug/l	
62-53-3	Aniline	ND	11	0.71	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.6	0.52	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.6	0.59	ug/l	
100-51-6	Benzyl Alcohol	ND	11	2.5	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.6	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.62	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.6	0.32	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.6	0.39	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.6	0.37	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.6	0.28	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.6	0.27	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.51	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.6	0.30	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.29	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.6	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.6	0.31	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.6	0.22	ug/l	
131-11-3	Dimethyl phthalate	ND	5.6	0.38	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.37	ug/l	
118-74-1	Hexachlorobenzene	ND	5.6	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	1.4	ug/l	
67-72-1	Hexachloroethane	ND	5.6	0.34	ug/l	
78-59-1	Isophorone	ND	5.6	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.44	ug/l	
99-09-2	3-Nitroaniline	ND	11	1.5	ug/l	
100-01-6	4-Nitroaniline	ND	11	2.4	ug/l	
98-95-3	Nitrobenzene	ND	5.6	0.43	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.6	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.6	0.45	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.6	0.21	ug/l	
110-86-1	Pyridine	ND	11	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	51%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	101%		15-110%
4165-60-0	Nitrobenzene-d5	83%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	95%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I92616.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
Run #2							

	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.077	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.055	ug/l	
120-12-7	Anthracene	ND	0.11	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.056	0.022	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.11	0.032	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.056	0.035	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.11	0.030	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.043	ug/l	
218-01-9	Chrysene	ND	0.11	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Fluoranthene	ND	0.11	0.045	ug/l	
86-73-7	Fluorene	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ug/l	
90-12-0	1-Methylnaphthalene	0.93	2.2	0.56	ug/l	J
91-57-6	2-Methylnaphthalene	0.57	2.2	0.56	ug/l	J
85-01-8	Phenanthrene	0.033	0.056	0.014	ug/l	J
129-00-0	Pyrene	ND	0.11	0.043	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		30-130%
321-60-8	2-Fluorobiphenyl	79%		30-130%
1718-51-0	Terphenyl-d14	85%		30-130%

ND = Not detected MDL = Method Detection Limit
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:	MW25-ROX-102114		
Lab Sample ID:	MC34553-4	Date Sampled:	10/21/14
Matrix:	AQ - Ground Water	Date Received:	10/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60089.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
Run #2							

	Initial Volume	Final Volume
Run #1	36.9 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	124%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-102114-HCL		
Lab Sample ID:	MC34553-5	Date Sampled:	10/21/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N91827.D	1	11/04/14	JB	n/a	n/a	MSN3393
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-102114-HCL		
Lab Sample ID:	MC34553-5	Date Sampled:	10/21/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-102114-HCL		
Lab Sample ID:	MC34553-5	Date Sampled:	10/21/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-102114-ST		
Lab Sample ID:	MC34553-6	Date Sampled:	10/21/14
Matrix:	AQ - Trip Blank Water	Date Received:	10/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB60090.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
Run #2							

	Initial Volume	Final Volume
Run #1	35.8 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0060	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0060	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		36-173%
460-00-4	Bromofluorobenzene (S)	102%		36-173%

ND = Not detected MDL = Method Detection Limit
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:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)
☐ XENCO (_____)
☐ CALSCIENCE
☒ OTHER (Accutest Laboratories 495 B Forbes Blvd Mansfield, MA 01752 (508-481-6200))
☐ SPL (Lab Vendor # (_____))
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SPOT ☐ EQUILON RETAIL ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Rob Billman
PO #
INCIDENT # (ENV SERVICES): 0 7 2 1 0 4 4 0
SAP #: 3 4 0 0 0 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 10/21/14
PAGE: 1 of 1

COMPANY: URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110
PROJECT CONTACT (Name and Email): Elizabeth Kunkel, Wendy Pennington, Bob Billman, Lindsey Hallmon
TELEPHONE: 314-429-0100 FAX: 314-429-0462
SAMPLER(S) (Name and Email): Elizabeth.Kunkel@URS.com, Wendy.Pennington@URS.com, Robert.Billman@URS.com, Lindsey.Hallmon@URS.com

Site Address: 900 South Central Ave, ROXANA, IL
Site #:
Project #:
Shell Cost Center:
Consultant Projects: Roxana Quarterly GW / 21562973.07004

Shell Contact: L. Rathnaw, C. Williams
LAB USE ONLY: MC34553

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:
DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☑ LEVEL 4 ☑ OTHER (SPECIFY): EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.
☑ SHELL CONTRACT RATE APPLIES
☐ STATE DEDICATED RATE APPLIES
☐ EDD NOT NEEDED
☑ ENCRYPT VERIFICATION REQUESTED
☐ PROVIDE EDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+2CS	PAH 8270LL	PID (ppm)	CONTAINER PID Readings or Laboratory Notes
-1	MW28-ROX-102114	10/21	1125	Water	2			2	2	6	X	X	X	X		
-2	MW27-ROX-102114		1325		2			2	2	6	X	X	X	X		
-3	MW26-ROX-102114		1445		2			2	2	6	X	X	X	X		
-4	MW25-ROX-102114		1600		2			2	2	6	X	X	X	X		
-5	TB-ROX-102114-HCL		0000		2					2	X					
-6	TB-ROX-102114-ST		0000						2	2		X				

FIELD NOTES:
TEMPERATURE ON RECEIPT C°:
Container PID Readings or Laboratory Notes: 19B, 364

Relinquished by (Signature):	Received by (Signature): FED EX	Date: 10/21/14	Time: 1730
Relinquished by (Signature): FX	Received by (Signature):	Date: 10-23-14	Time: 930
Relinquished by (Signature):	Received by (Signature):	Date:	Time:

Airbill #858716704468

1.7°C

5.1
41

MC34553: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34553 Client: URS Project: ROX QUARTERLY

Date / Time Received: 10/23/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (1.7/1.7);

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	1

Quality Control Preservation	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 01752
www.accutest.com

MC34553: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34553

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34553-1 Collected: 21-OCT-14 11:25 By: LRCW Received: 23-OCT-14 By: MW28-ROX-102114						
MC34553-1	SW846 8011	28-OCT-14 13:16	NK	27-OCT-14	NE	V8011SL
MC34553-1	SW846 8270D BY SIM	30-OCT-14 14:02	MR	26-OCT-14	AJ	B8270SIMSL
MC34553-1	SW846 8270D	31-OCT-14 19:25	KD	26-OCT-14	AJ	AB8270SL+
MC34553-1	SW846 8260C	04-NOV-14 13:05	JB			V8260SL+
MC34553-2 Collected: 21-OCT-14 13:25 By: LRCW Received: 23-OCT-14 By: MW27-ROX-102114						
MC34553-2	SW846 8011	28-OCT-14 13:33	NK	27-OCT-14	NE	V8011SL
MC34553-2	SW846 8270D BY SIM	30-OCT-14 14:25	MR	26-OCT-14	AJ	B8270SIMSL
MC34553-2	SW846 8270D	31-OCT-14 18:02	MR	26-OCT-14	AJ	AB8270SL+
MC34553-2	SW846 8260C	04-NOV-14 13:33	JB			V8260SL+
MC34553-3 Collected: 21-OCT-14 14:45 By: LRCW Received: 23-OCT-14 By: MW26-ROX-102114						
MC34553-3	SW846 8011	28-OCT-14 13:51	NK	27-OCT-14	NE	V8011SL
MC34553-3	SW846 8270D BY SIM	30-OCT-14 14:47	MR	26-OCT-14	AJ	B8270SIMSL
MC34553-3	SW846 8270D	31-OCT-14 18:24	MR	26-OCT-14	AJ	AB8270SL+
MC34553-3	SW846 8260C	04-NOV-14 14:01	JB			V8260SL+
MC34553-4 Collected: 21-OCT-14 16:00 By: LRCW Received: 23-OCT-14 By: MW25-ROX-102114						
MC34553-4	SW846 8011	28-OCT-14 14:27	NK	27-OCT-14	NE	V8011SL
MC34553-4	SW846 8270D BY SIM	30-OCT-14 15:10	MR	26-OCT-14	AJ	B8270SIMSL
MC34553-4	SW846 8270D	31-OCT-14 18:47	MR	26-OCT-14	AJ	AB8270SL+
MC34553-4	SW846 8260C	04-NOV-14 14:30	JB			V8260SL+
MC34553-5 Collected: 21-OCT-14 00:00 By: LRCW Received: 23-OCT-14 By: TB-ROX-102114-HCL						
MC34553-5	SW846 8260C	04-NOV-14 10:15	JB			V8260SL+
MC34553-6 Collected: 21-OCT-14 00:00 By: LRCW Received: 23-OCT-14 By: TB-ROX-102114-ST						

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34553

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34553-6	SW846 8011	28-OCT-14 14:45	NK	27-OCT-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/23/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34553-1.1	Walk In Ref #22	Marc Tahtamoni	10/26/14 14:52	Retrieve from Storage
MC34553-1.3	VOC Ref #3	Jaclyn Bergeron	11/04/14 09:17	Retrieve from Storage
MC34553-1.3	Jaclyn Bergeron	GCMSN	11/04/14 09:17	Load on Instrument
MC34553-1.3	GCMSN	Jaclyn Bergeron	11/05/14 08:36	Unload from Instrument
MC34553-1.3	Jaclyn Bergeron	VOC Ref #3	11/05/14 08:36	Return to Storage
MC34553-1.4	VOC Ref #3	Gary Krasinski	11/03/14 16:28	Retrieve from Storage
MC34553-1.4	Gary Krasinski	GCMSL	11/03/14 16:28	Load on Instrument
MC34553-1.4	GCMSL	Gary Krasinski	11/04/14 11:08	Unload from Instrument
MC34553-1.4	Gary Krasinski	VOC Ref #3	11/04/14 11:09	Return to Storage
MC34553-1.6	VOC Ref #3	Marc Tahtamoni	10/27/14 14:13	Retrieve from Storage
MC34553-2.2	Walk In Ref #22	Marc Tahtamoni	10/26/14 14:52	Retrieve from Storage
MC34553-2.3	VOC Ref #3	Jaclyn Bergeron	11/04/14 09:19	Retrieve from Storage
MC34553-2.3	Jaclyn Bergeron	GCMSN	11/04/14 09:19	Load on Instrument
MC34553-2.3	GCMSN	Jaclyn Bergeron	11/05/14 08:36	Unload from Instrument
MC34553-2.3	Jaclyn Bergeron	VOC Ref #3	11/05/14 08:36	Return to Storage
MC34553-2.4	VOC Ref #3	Gary Krasinski	11/03/14 16:28	Retrieve from Storage
MC34553-2.4	Gary Krasinski	GCMSL	11/03/14 16:28	Load on Instrument
MC34553-2.4	GCMSL	Gary Krasinski	11/04/14 11:08	Unload from Instrument
MC34553-2.4	Gary Krasinski	VOC Ref #3	11/04/14 11:09	Return to Storage
MC34553-2.5	VOC Ref #3	Marc Tahtamoni	10/27/14 14:13	Retrieve from Storage
MC34553-3.2	Walk In Ref #22	Marc Tahtamoni	10/26/14 14:52	Retrieve from Storage
MC34553-3.3	VOC Ref #3	Jaclyn Bergeron	11/04/14 09:19	Retrieve from Storage
MC34553-3.3	Jaclyn Bergeron	GCMSN	11/04/14 09:19	Load on Instrument
MC34553-3.3	GCMSN	Jaclyn Bergeron	11/05/14 08:36	Unload from Instrument
MC34553-3.3	Jaclyn Bergeron	VOC Ref #3	11/05/14 08:36	Return to Storage
MC34553-3.4	VOC Ref #3	Gary Krasinski	11/03/14 16:28	Retrieve from Storage
MC34553-3.4	Gary Krasinski	GCMSL	11/03/14 16:28	Load on Instrument
MC34553-3.4	GCMSL	Gary Krasinski	11/04/14 11:08	Unload from Instrument
MC34553-3.4	Gary Krasinski	VOC Ref #3	11/04/14 11:09	Return to Storage
MC34553-3.5	VOC Ref #3	Marc Tahtamoni	10/27/14 14:13	Retrieve from Storage
MC34553-4.2	Walk In Ref #22	Marc Tahtamoni	10/26/14 14:52	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 10/23/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34553-4.3	VOC Ref #3	Gary Krasinski	11/03/14 16:28	Retrieve from Storage
MC34553-4.3	Gary Krasinski	GCMSL	11/03/14 16:28	Load on Instrument
MC34553-4.3	GCMSL	Gary Krasinski	11/04/14 11:08	Unload from Instrument
MC34553-4.3	Gary Krasinski	VOC Ref #3	11/04/14 11:09	Return to Storage
MC34553-4.4	VOC Ref #3	Jaclyn Bergeron	11/04/14 09:19	Retrieve from Storage
MC34553-4.4	Jaclyn Bergeron	GCMSN	11/04/14 09:19	Load on Instrument
MC34553-4.4	GCMSN	Jaclyn Bergeron	11/05/14 08:36	Unload from Instrument
MC34553-4.4	Jaclyn Bergeron	VOC Ref #3	11/05/14 08:36	Return to Storage
MC34553-4.6	VOC Ref #3	Marc Tahtamoni	10/27/14 14:13	Retrieve from Storage
MC34553-5.1	VOC Ref #3	Jaclyn Bergeron	11/04/14 09:17	Retrieve from Storage
MC34553-5.1	Jaclyn Bergeron	GCMSN	11/04/14 09:17	Load on Instrument
MC34553-5.1	GCMSN	Jaclyn Bergeron	11/05/14 08:36	Unload from Instrument
MC34553-5.1	Jaclyn Bergeron	VOC Ref #3	11/05/14 08:36	Return to Storage
MC34553-6.2	VOC Ref #3	Marc Tahtamoni	10/27/14 14:13	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

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: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-MB	N91826.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-MB	N91826.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-MB	N91826.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	104%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

6.1.1

Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-BS	N91823.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.2	104	70-130
107-02-8	Acrolein	250	243	97	70-130
107-13-1	Acrylonitrile	50	50.4	101	70-130
71-43-2	Benzene	50	49.9	100	70-130
108-86-1	Bromobenzene	50	53.9	108	70-130
74-97-5	Bromochloromethane	50	56.9	114	70-130
75-27-4	Bromodichloromethane	50	46.7	93	70-130
75-25-2	Bromoform	50	51.1	102	70-130
74-83-9	Bromomethane	50	47.3	95	70-130
78-93-3	2-Butanone (MEK)	50	65.6	131* a	70-130
104-51-8	n-Butylbenzene	50	55.3	111	70-130
135-98-8	sec-Butylbenzene	50	56.3	113	70-130
98-06-6	tert-Butylbenzene	50	50.6	101	70-130
75-15-0	Carbon disulfide	50	67.1	134* a	70-130
56-23-5	Carbon tetrachloride	50	44.7	89	70-130
108-90-7	Chlorobenzene	50	51.6	103	70-130
75-00-3	Chloroethane	50	62.1	124	70-130
110-75-8	2-Chloroethyl vinyl ether	50	56.3	113	70-130
67-66-3	Chloroform	50	45.5	91	70-130
74-87-3	Chloromethane	50	39.9	80	70-130
95-49-8	o-Chlorotoluene	50	52.7	105	70-130
106-43-4	p-Chlorotoluene	50	51.5	103	70-130
124-48-1	Dibromochloromethane	50	50.8	102	70-130
95-50-1	1,2-Dichlorobenzene	50	53.5	107	70-130
541-73-1	1,3-Dichlorobenzene	50	52.9	106	70-130
106-46-7	1,4-Dichlorobenzene	50	57.4	115	70-130
75-71-8	Dichlorodifluoromethane	50	40.5	81	70-130
75-34-3	1,1-Dichloroethane	50	49.7	99	70-130
107-06-2	1,2-Dichloroethane	50	38.8	78	70-130
75-35-4	1,1-Dichloroethene	50	63.9	128	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.0	108	70-130
156-60-5	trans-1,2-Dichloroethene	50	55.5	111	70-130
78-87-5	1,2-Dichloropropane	50	55.6	111	70-130
142-28-9	1,3-Dichloropropane	50	56.0	112	70-130
594-20-7	2,2-Dichloropropane	50	50.5	101	70-130
563-58-6	1,1-Dichloropropene	50	57.2	114	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-BS	N91823.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	57.7	115	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.5	117	70-130
123-91-1	1,4-Dioxane	125	148	118	70-130
97-63-2	Ethyl methacrylate	50	55.7	111	77-137
100-41-4	Ethylbenzene	50	50.7	101	70-130
87-68-3	Hexachlorobutadiene	50	48.4	97	70-130
591-78-6	2-Hexanone	50	48.6	97	70-130
98-82-8	Isopropylbenzene	50	55.9	112	70-130
99-87-6	p-Isopropyltoluene	50	54.3	109	70-130
1634-04-4	Methyl Tert Butyl Ether	50	47.2	94	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	45.0	90	70-130
74-95-3	Methylene bromide	50	52.0	104	70-130
75-09-2	Methylene chloride	50	55.9	112	70-130
91-20-3	Naphthalene	50	46.8	94	70-130
103-65-1	n-Propylbenzene	50	57.1	114	70-130
100-42-5	Styrene	50	59.1	118	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	48.5	97	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	63.8	128	70-130
127-18-4	Tetrachloroethene	50	50.2	100	70-130
108-88-3	Toluene	50	52.3	105	70-130
87-61-6	1,2,3-Trichlorobenzene	50	44.5	89	70-130
120-82-1	1,2,4-Trichlorobenzene	50	53.9	108	70-130
71-55-6	1,1,1-Trichloroethane	50	50.2	100	70-130
79-00-5	1,1,2-Trichloroethane	50	50.5	101	70-130
79-01-6	Trichloroethene	50	45.7	91	70-130
75-69-4	Trichlorofluoromethane	50	41.9	84	70-130
96-18-4	1,2,3-Trichloropropane	50	58.7	117	70-130
95-63-6	1,2,4-Trimethylbenzene	50	49.5	99	70-130
108-67-8	1,3,5-Trimethylbenzene	50	47.8	96	70-130
108-05-4	Vinyl Acetate	50	43.4	87	70-130
75-01-4	Vinyl chloride	50	47.5	95	70-130
	m,p-Xylene	100	103	103	70-130
95-47-6	o-Xylene	50	52.3	105	70-130
1330-20-7	Xylene (total)	150	155	103	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3393-BS	N91823.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34589-1MS	N91846.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1MSD	N91847.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1	N91829.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	MC34589-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	133	53* [a]	250	127	51* [a]	5	70-130/30
107-02-8	Acrolein	ND		1250	1330	106	1250	1310	105	2	70-130/30
107-13-1	Acrylonitrile	ND		250	283	113	250	280	112	1	70-130/30
71-43-2	Benzene	ND		250	256	102	250	259	104	1	70-130/30
108-86-1	Bromobenzene	ND		250	262	105	250	265	106	1	70-130/30
74-97-5	Bromochloromethane	ND		250	294	118	250	291	116	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	237	95	250	238	95	0	70-130/30
75-25-2	Bromoform	ND		250	247	99	250	244	98	1	70-130/30
74-83-9	Bromomethane	ND		250	224	90	250	250	100	11	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	265	106	250	270	108	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	274	110	250	272	109	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	281	112	250	278	111	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	259	104	250	253	101	2	70-130/30
75-15-0	Carbon disulfide	ND		250	359	144* [a]	250	354	142* [a]	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	230	92	250	232	93	1	70-130/30
108-90-7	Chlorobenzene	ND		250	243	97	250	245	98	1	70-130/30
75-00-3	Chloroethane	ND		250	344	138* [a]	250	345	138* [a]	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	295	118	250	293	117	1	70-130/30
67-66-3	Chloroform	ND		250	241	96	250	241	96	0	70-130/30
74-87-3	Chloromethane	ND		250	303	121	250	299	120	1	70-130/30
95-49-8	o-Chlorotoluene	ND		250	262	105	250	263	105	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	255	102	250	255	102	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	240	96	250	242	97	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	262	105	250	261	104	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	257	103	250	258	103	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	284	114	250	287	115	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	224	90	250	222	89	1	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	265	106	250	266	106	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	210	84	250	209	84	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	348	139* [a]	250	351	140* [a]	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	280	112	250	281	112	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	285	114	250	286	114	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	291	116	250	289	116	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	272	109	250	275	110	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	242	97	250	239	96	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	299	120	250	301	120	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34589-1MS	N91846.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1MSD	N91847.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1	N91829.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Compound	MC34589-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	286	114	250	290	116	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	297	119	250	295	118	1	70-130/30
123-91-1	1,4-Dioxane	ND		625	672	108	625	685	110	2	70-130/30
97-63-2	Ethyl methacrylate	ND		250	300	120	250	288	115	4	72-139/30
100-41-4	Ethylbenzene	ND		250	247	99	250	247	99	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	228	91	250	229	92	0	70-130/30
591-78-6	2-Hexanone	ND		250	187	75	250	178	71	5	70-130/30
98-82-8	Isopropylbenzene	ND		250	274	110	250	280	112	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	273	109	250	274	110	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	242	97	250	238	95	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	248	99	250	233	93	6	70-130/30
74-95-3	Methylene bromide	ND		250	269	108	250	270	108	0	70-130/30
75-09-2	Methylene chloride	ND		250	298	119	250	293	117	2	70-130/30
91-20-3	Naphthalene	ND		250	244	98	250	252	101	3	70-130/30
103-65-1	n-Propylbenzene	ND		250	284	114	250	281	112	1	70-130/30
100-42-5	Styrene	ND		250	275	110	250	271	108	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	226	90	250	231	92	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	342	137* [a]	250	344	138* [a]	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	245	98	250	240	96	2	70-130/30
108-88-3	Toluene	ND		250	265	106	250	266	106	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	223	89	250	225	90	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	257	103	250	263	105	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	270	108	250	269	108	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	259	104	250	256	102	1	70-130/30
79-01-6	Trichloroethene	ND		250	234	94	250	234	94	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	219	88	250	221	88	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	311	124	250	303	121	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	244	98	250	243	97	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	234	94	250	234	94	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	243	97	250	239	96	2	70-130/30
75-01-4	Vinyl chloride	ND		250	325	130	250	317	127	2	70-130/30
	m,p-Xylene	ND		500	492	98	500	490	98	0	70-130/30
95-47-6	o-Xylene	ND		250	249	100	250	250	100	0	70-130/30
1330-20-7	Xylene (total)	ND		750	740	99	750	739	99	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34589-1MS	N91846.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1MSD	N91847.D	5	11/04/14	JB	n/a	n/a	MSN3393
MC34589-1	N91829.D	1	11/04/14	JB	n/a	n/a	MSN3393

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

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-5

CAS No.	Surrogate Recoveries	MS	MSD	MC34589-1	Limits
1868-53-7	Dibromofluoromethane	98%	98%	95%	70-130%
2037-26-5	Toluene-D8	105%	106%	102%	70-130%
460-00-4	4-Bromofluorobenzene	97%	98%	104%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSN3393-CC3345	Injection Date:	11/04/14
Lab File ID:	N91823.D	Injection Time:	08:22
Instrument ID:	GCMSN	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	372635	9.12	601865	9.98	313678	13.24	243750	15.79	129794	6.71
Upper Limit [a]	745270	9.62	1203730	10.48	627356	13.74	487500	16.29	259588	7.21
Lower Limit [b]	186318	8.62	300933	9.48	156839	12.74	121875	15.29	64897	6.21
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN3393-BS	372635	9.12	601865	9.98	313678	13.24	243750	15.79	129794	6.71
MSN3393-MB	346259	9.12	561342	9.98	281831	13.24	191954	15.80	125264	6.75
MC34553-5	336938	9.12	537858	9.98	265133	13.24	179481	15.80	117933	6.75
ZZZZZZ	331102	9.12	534615	9.99	265135	13.24	181720	15.80	121467	6.75
MC34589-1	331412	9.12	537713	9.99	268271	13.24	185232	15.79	114030	6.76
ZZZZZZ	324221	9.12	521801	9.99	265030	13.24	196478	15.79	125821	6.75
ZZZZZZ	327910	9.12	521814	9.99	262734	13.24	183083	15.80	129074	6.75
ZZZZZZ	323767	9.11	520405	9.99	259169	13.24	173759	15.79	125325	6.75
MC34553-1	331514	9.12	540285	9.99	264532	13.24	180375	15.79	132672	6.75
MC34553-2	316227	9.12	514109	9.99	255705	13.24	171117	15.79	129965	6.75
MC34553-3	307989	9.12	500555	9.98	246964	13.24	166625	15.79	119035	6.75
MC34553-4	302910	9.11	508929	9.99	251959	13.24	164685	15.79	129635	6.75
ZZZZZZ	300411	9.11	492749	9.99	255257	13.24	164117	15.79	121299	6.75
ZZZZZZ	294250	9.11	484702	9.99	242528	13.24	155539	15.80	120390	6.75
ZZZZZZ	296542	9.11	494507	9.98	249321	13.24	172453	15.80	149342	6.72
ZZZZZZ	287063	9.12	475093	9.99	242002	13.24	163447	15.79	119514	6.74
ZZZZZZ	284098	9.12	462954	9.99	238280	13.24	155818	15.79	117746	6.74
ZZZZZZ	287912	9.11	475187	9.99	243932	13.24	159870	15.79	110923	6.74
ZZZZZZ	280157	9.11	459387	9.99	232691	13.24	153127	15.79	115278	6.74
ZZZZZZ	277781	9.12	452756	9.99	229830	13.24	152438	15.79	107225	6.75
ZZZZZZ	278028	9.12	456986	9.99	237293	13.24	153689	15.79	114862	6.74
MC34589-1MS	293413	9.11	486503	9.99	266921	13.24	203608	15.79	124299	6.71
MC34589-1MSD	320551	9.12	526040	9.98	284683	13.24	212459	15.79	120847	6.71

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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34553-1	N91833.D	97	101	105
MC34553-2	N91834.D	96	102	107
MC34553-3	N91835.D	95	101	105
MC34553-4	N91836.D	96	102	108
MC34553-5	N91827.D	91	102	105
MC34589-1MS	N91846.D	98	105	97
MC34589-1MSD	N91847.D	98	106	98
MSN3393-BS	N91823.D	94	104	97
MSN3393-MB	N91826.D	94	101	104

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

6.5.1

New England ACCUTEST LABORATORIES

GC/MS Semi-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: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-MB	R40736.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.31	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.83	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.40	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.56	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.9	ug/l	
95-48-7	2-Methylphenol	ND	10	0.23	ug/l	
	3&4-Methylphenol	ND	10	0.47	ug/l	
88-75-5	2-Nitrophenol	ND	10	2.9	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.53	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.1	ug/l	
108-95-2	Phenol	ND	5.0	0.30	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.37	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.18	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.47	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.53	ug/l	
100-51-6	Benzyl Alcohol	ND	10	2.3	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.31	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.56	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.29	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.35	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.33	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.25	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.24	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.46	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.30	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.27	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.26	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.17	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.28	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.20	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.34	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.29	ug/l	

Method Blank Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-MB	R40736.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.30	ug/l	
78-59-1	Isophorone	ND	5.0	0.45	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.40	ug/l	
99-09-2	3-Nitroaniline	ND	10	1.4	ug/l	
100-01-6	4-Nitroaniline	ND	10	2.2	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.39	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.40	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.19	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	92%	15-110%
4165-60-0	Nitrobenzene-d5	72%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	99%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40383-MB	I92608.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.092	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.039	ug/l	
218-01-9	Chrysene	ND	0.10	0.024	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.032	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	ND	0.10	0.099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.038	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	74%	30-130%
1718-51-0	Terphenyl-d14	84%	30-130%

Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-BS	R40737.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	11.7	23*	30-130
95-57-8	2-Chlorophenol	50	37.0	74	30-130
59-50-7	4-Chloro-3-methyl phenol	50	35.5	71	30-130
120-83-2	2,4-Dichlorophenol	50	44.4	89	30-130
105-67-9	2,4-Dimethylphenol	50	28.9	58	30-130
51-28-5	2,4-Dinitrophenol	50	24.2	48	30-130
534-52-1	4,6-Dinitro-o-cresol	50	35.2	70	30-130
95-48-7	2-Methylphenol	50	29.3	59	30-130
	3&4-Methylphenol	100	56.3	56	30-130
88-75-5	2-Nitrophenol	50	43.7	87	30-130
100-02-7	4-Nitrophenol	50	18.5	37	30-130
87-86-5	Pentachlorophenol	50	24.3	49	30-130
108-95-2	Phenol	50	15.5	31	30-130
95-95-4	2,4,5-Trichlorophenol	50	43.7	87	30-130
88-06-2	2,4,6-Trichlorophenol	50	44.9	90	30-130
62-53-3	Aniline	50	26.3	53	40-140
101-55-3	4-Bromophenyl phenyl ether	50	50.9	102	40-140
85-68-7	Butyl benzyl phthalate	50	45.1	90	40-140
100-51-6	Benzyl Alcohol	50	32.2	64	40-140
91-58-7	2-Chloronaphthalene	50	47.7	95	40-140
106-47-8	4-Chloroaniline	50	39.3	79	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	37.3	75	40-140
111-44-4	bis(2-Chloroethyl)ether	50	35.7	71	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	50.1	100	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.3	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.7	83	40-140
121-14-2	2,4-Dinitrotoluene	50	46.0	92	40-140
606-20-2	2,6-Dinitrotoluene	50	44.8	90	40-140
91-94-1	3,3'-Dichlorobenzidine	50	42.0	84	40-140
132-64-9	Dibenzofuran	50	42.4	85	40-140
84-74-2	Di-n-butyl phthalate	50	42.2	84	40-140
117-84-0	Di-n-octyl phthalate	50	43.0	86	40-140
84-66-2	Diethyl phthalate	50	40.7	81	40-140
131-11-3	Dimethyl phthalate	50	41.1	82	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.6	91	40-140
118-74-1	Hexachlorobenzene	50	54.8	110	40-140

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-BS	R40737.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	19.9	40	40-140
67-72-1	Hexachloroethane	50	28.5	57	40-140
78-59-1	Isophorone	50	33.3	67	40-140
88-74-4	2-Nitroaniline	50	43.9	88	40-140
99-09-2	3-Nitroaniline	50	40.5	81	40-140
100-01-6	4-Nitroaniline	50	39.2	78	40-140
98-95-3	Nitrobenzene	50	52.9	106	40-140
62-75-9	n-Nitrosodimethylamine	50	24.2	48	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	31.5	63	40-140
86-30-6	N-Nitrosodiphenylamine	50	40.0	80	40-140
110-86-1	Pyridine	50	22.7	45	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	97%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	95%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40383-BS	I92609.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34553-1, MC34553-2, MC34553-3, MC34553-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	41.6	83	40-140
208-96-8	Acenaphthylene	50	36.9	74	40-140
120-12-7	Anthracene	50	44.1	88	40-140
56-55-3	Benzo(a)anthracene	50	51.4	103	40-140
50-32-8	Benzo(a)pyrene	50	46.8	94	40-140
205-99-2	Benzo(b)fluoranthene	50	48.1	96	40-140
191-24-2	Benzo(g,h,i)perylene	50	46.3	93	40-140
207-08-9	Benzo(k)fluoranthene	50	46.2	92	40-140
218-01-9	Chrysene	50	46.8	94	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.3	93	40-140
206-44-0	Fluoranthene	50	41.8	84	40-140
86-73-7	Fluorene	50	45.6	91	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.8	92	40-140
90-12-0	1-Methylnaphthalene	50	39.2	78	40-140
91-57-6	2-Methylnaphthalene	50	39.2	78	40-140
85-01-8	Phenanthrene	50	45.4	91	40-140
129-00-0	Pyrene	50	39.7	79	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	88%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	81%	30-130%

* = Outside of Control Limits.

7.2.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-MS	R40738.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499
OP40382-MSD	R40739.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499
MC34200-6	R40740.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

7.3.1

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CAS No.	Compound	MC34200-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	12.7	25* [a]	50	11.7	23* [a]	8	30-130/20
95-57-8	2-Chlorophenol	ND		50	39.2	78	50	38.7	77	1	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	36.5	73	50	36.7	73	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	46.6	93	50	46.7	93	0	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	33.5	67	50	32.0	64	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	31.7	63	50	29.0	58	9	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	41.6	83	50	40.4	81	3	30-130/20
95-48-7	2-Methylphenol	ND		50	31.3	63	50	30.6	61	2	30-130/20
	3&4-Methylphenol	ND		100	59.5	60	100	59.5	60	0	30-130/20
88-75-5	2-Nitrophenol	ND		50	46.2	92	50	46.2	92	0	30-130/20
100-02-7	4-Nitrophenol	ND		50	19.1	38	50	19.3	39	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	25.1	50	50	25.3	51	1	30-130/20
108-95-2	Phenol	ND		50	16.1	32	50	16.2	32	1	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	45.6	91	50	45.8	92	0	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	47.1	94	50	47.2	94	0	30-130/20
62-53-3	Aniline	ND		50	28.8	58	50	28.3	57	2	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	55.0	110	50	52.8	106	4	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	48.4	97	50	47.2	94	3	40-140/20
100-51-6	Benzyl Alcohol	ND		50	34.6	69	50	33.8	68	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	50.7	101	50	50.1	100	1	40-140/20
106-47-8	4-Chloroaniline	ND		50	42.4	85	50	42.2	84	0	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	39.8	80	50	38.3	77	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	37.8	76	50	36.7	73	3	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	53.7	107	50	51.2	102	5	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	46.7	93	50	46.1	92	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	43.5	87	50	43.4	87	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	50.5	101	50	47.4	95	6	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	48.9	98	50	46.8	94	4	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	45.1	90	50	46.8	94	4	40-140/20
132-64-9	Dibenzofuran	ND		50	44.1	88	50	43.4	87	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	44.8	90	50	44.0	88	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	44.7	89	50	44.3	89	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	44.3	89	50	43.9	88	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	44.6	89	50	44.3	89	1	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	48.3	97	50	47.2	94	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	58.8	118	50	57.7	115	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40382-MS	R40738.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499
OP40382-MSD	R40739.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499
MC34200-6	R40740.D	1	10/31/14	KD	10/26/14	OP40382	MSR1499

The QC reported here applies to the following samples: Method: SW846 8270D

MC34553-1, MC34553-2, MC34553-3, MC34553-4

7.3.1

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CAS No.	Compound	MC34200-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	22.7	45	50	22.9	46	1	40-140/20
67-72-1	Hexachloroethane	ND		50	32.5	65	50	31.7	63	2	40-140/20
78-59-1	Isophorone	ND		50	35.3	71	50	34.2	68	3	40-140/20
88-74-4	2-Nitroaniline	ND		50	46.1	92	50	45.4	91	2	40-140/20
99-09-2	3-Nitroaniline	ND		50	42.1	84	50	41.8	84	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	42.3	85	50	40.6	81	4	40-140/20
98-95-3	Nitrobenzene	ND		50	56.0	112	50	55.3	111	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	25.6	51	50	24.8	50	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	32.5	65	50	32.4	65	0	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	44.0	88	50	42.1	84	4	40-140/20
110-86-1	Pyridine	ND		50	24.0	48	50	23.5	47	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34200-6	Limits
367-12-4	2-Fluorophenol	47%	47%	42%	15-110%
4165-62-2	Phenol-d5	35%	34%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	106%	102%	87%	15-110%
4165-60-0	Nitrobenzene-d5	74%	73%	72%	30-130%
321-60-8	2-Fluorobiphenyl	82%	82%	79%	30-130%
1718-51-0	Terphenyl-d14	101%	98%	96%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40383-MS	I92610.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
OP40383-MSD	I92611.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452
MC34200-7	I92612.D	1	10/30/14	MR	10/26/14	OP40383	MSI3452

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC34553-1, MC34553-2, MC34553-3, MC34553-4

7.3.2

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CAS No.	Compound	MC34200-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	44.1	88	50	42.9	86	3	40-140/20
208-96-8	Acenaphthylene	ND		50	39.0	78	50	38.4	77	2	40-140/20
120-12-7	Anthracene	ND		50	46.7	93	50	45.1	90	3	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	55.1	110	50	53.0	106	4	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	50.2	100	50	48.2	96	4	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	58.6	117	50	50.7	101	14	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	49.4	99	50	47.5	95	4	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	42.2	84	50	46.1	92	9	40-140/20
218-01-9	Chrysene	ND		50	49.8	100	50	49.0	98	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	49.7	99	50	47.7	95	4	40-140/20
206-44-0	Fluoranthene	ND		50	43.9	88	50	42.4	85	3	40-140/20
86-73-7	Fluorene	ND		50	47.8	96	50	47.1	94	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	49.1	98	50	47.3	95	4	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	42.0	84	50	40.9	82	3	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	42.2	84	50	41.0	82	3	40-140/20
85-01-8	Phenanthrene	ND		50	48.1	96	50	47.4	95	1	40-140/20
129-00-0	Pyrene	ND		50	42.5	85	50	40.8	82	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC34200-7	Limits
4165-60-0	Nitrobenzene-d5	91%	89%	88%	30-130%
321-60-8	2-Fluorobiphenyl	81%	79%	76%	30-130%
1718-51-0	Terphenyl-d14	85%	82%	81%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSF3381-CC3361	Injection Date:	10/31/14
Lab File ID:	F77196.D	Injection Time:	14:11
Instrument ID:	GCMSF	Method:	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	51668	3.97	184918	5.02	122344	6.54	211428	7.82	282460	10.34	264118	12.01
Upper Limit [a]	103336	4.47	369836	5.52	244688	7.04	422856	8.32	564920	10.84	528236	12.51
Lower Limit [b]	25834	3.47	92459	4.52	61172	6.04	105714	7.32	141230	9.84	132059	11.51
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	61873	3.97	213905	5.01	137979	6.54	270104	7.82	319153	10.34	303547	12.01
ZZZZZZ	54447	3.97	193661	5.01	127903	6.54	242266	7.82	326401	10.34	302645	12.01
ZZZZZZ	58108	3.96	203410	5.01	131987	6.54	250365	7.82	305696	10.33	279504	12.01
ZZZZZZ	53567	3.96	188125	5.01	128098	6.54	238867	7.82	310492	10.33	292982	12.01
ZZZZZZ	55430	3.97	189752	5.01	124885	6.54	245692	7.82	315158	10.34	300905	12.01
OP40465-MB	52758	3.96	183371	5.01	121919	6.54	226092	7.82	276654	10.33	255652	12.01
OP40465-BS	58381	3.97	205864	5.01	124517	6.54	227066	7.82	271773	10.34	253226	12.01
OP40465-BSD	56195	3.97	206001	5.02	125111	6.54	221702	7.82	283547	10.34	255205	12.01
ZZZZZZ	58955	3.97	225644	5.02	151940	6.54	310726	7.82	449851	10.37	480081	12.08
MC34553-2	60668	3.97	213943	5.02	142385	6.54	298093	7.82	401491	10.34	434454	12.01
MC34553-3	60306	3.97	200964	5.02	130471	6.54	260580	7.82	357039	10.34	379197	12.01
MC34553-4	66588	3.97	220791	5.01	144816	6.54	271756	7.82	356317	10.34	378337	12.01
OP40470-MB	49202	3.97	172369	5.01	116096	6.54	225541	7.82	289827	10.34	296624	12.01
OP40470-LB	49202	3.97	172369	5.01	116096	6.54	225541	7.82	289827	10.34	296624	12.01
OP40470-BS	63074	3.97	218059	5.02	141228	6.54	261273	7.82	336944	10.34	357967	12.01
ZZZZZZ	46770	3.96	163701	5.01	109551	6.54	212333	7.82	271462	10.33	278314	12.01
ZZZZZZ	54424	3.96	183392	5.01	120307	6.54	223035	7.82	274786	10.33	277323	12.01
ZZZZZZ	50496	3.96	175476	5.01	112270	6.54	210702	7.82	258057	10.34	260823	12.01
ZZZZZZ	56079	3.96	203058	5.01	131177	6.54	251216	7.82	307594	10.33	321964	12.01

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.1

Semivolatile Internal Standard Area Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSI3452-CC3427	Injection Date:	10/30/14
Lab File ID:	I92599.D	Injection Time:	08:44
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	259846	2.71	583482	3.73	334178	5.21	597233	6.45	555049	9.07	936878	10.46
Upper Limit [a]	519692	3.21	1166964	4.23	668356	5.71	1194466	6.95	1110098	9.57	1873756	10.96
Lower Limit [b]	129923	2.21	291741	3.23	167089	4.71	298617	5.95	277525	8.57	468439	9.96
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	349723	2.72	767972	3.73	438516	5.21	757280	6.45	669094	9.07	1051294	10.46
ZZZZZZ	311146	2.72	691892	3.73	398504	5.21	687621	6.45	620807	9.07	1012827	10.46
ZZZZZZ	291668	2.72	653497	3.73	370399	5.21	648877	6.44	573628	9.07	938253	10.46
ZZZZZZ	340193	2.72	756444	3.73	428655	5.21	736797	6.45	636933	9.07	989172	10.47
OP40320-MB	258983	2.71	575867	3.73	328799	5.21	575879	6.45	534307	9.07	858033	10.45
OP40320-BS	250821	2.71	564170	3.73	321541	5.21	557860	6.45	522351	9.08	849309	10.46
ZZZZZZ	256990	2.71	558827	3.73	325004	5.21	561401	6.44	513988	9.07	838248	10.45
ZZZZZZ	252267	2.71	555342	3.73	316530	5.21	547549	6.44	481113	9.07	731520	10.47
OP40383-MB	263545	2.71	585862	3.73	334970	5.21	584391	6.44	530994	9.07	891128	10.45
OP40383-BS	283636	2.71	637836	3.74	361394	5.22	621892	6.45	561707	9.08	933688	10.46
OP40383-MS	268690	2.71	608123	3.74	343643	5.22	589802	6.45	535675	9.08	886463	10.46
OP40383-MSD	261612	2.71	587902	3.74	333152	5.22	576894	6.45	517630	9.08	870213	10.46
MC34200-7	258908	2.71	569665	3.73	322468	5.21	561646	6.44	508458	9.07	864244	10.45
MC34553-1	274174	2.71	602855	3.73	340376	5.21	600869	6.44	543748	9.07	909748	10.45
MC34553-2	260642	2.71	564206	3.73	322355	5.21	565943	6.44	509645	9.07	859551	10.45
MC34553-3	255543	2.71	557477	3.73	317025	5.21	550808	6.44	496763	9.07	836208	10.45
MC34553-4	273092	2.72	599376	3.73	344546	5.21	595180	6.44	526716	9.07	885219	10.45
ZZZZZZ	261362	2.71	578197	3.73	323987	5.21	562840	6.44	511611	9.07	861038	10.45
ZZZZZZ	260483	2.71	574116	3.73	323837	5.21	569046	6.44	526031	9.07	859615	10.45
ZZZZZZ	248414	2.71	538539	3.73	306480	5.21	533283	6.44	484752	9.07	796878	10.45

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(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.

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1499-CC1481	Injection Date:	10/31/14
Lab File ID:	R40713.D	Injection Time:	08:02
Instrument ID:	GCMSR	Method:	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	395004	3.39	1357825	4.53	822129	6.02	1345434	7.26	1280900	9.49	1218427	10.67
Upper Limit [a]	790008	3.89	2715650	5.03	1644258	6.52	2690868	7.76	2561800	9.99	2436854	11.17
Lower Limit [b]	197502	2.89	678913	4.03	411065	5.52	672717	6.76	640450	8.99	609214	10.17
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP40284-MB	501532	3.38	1739473	4.52	1058636	6.01	1773344	7.25	1678443	9.48	1589584	10.67
OP40284-BS	505209	3.39	1743981	4.53	1038092	6.02	1646077	7.26	1590893	9.49	1490930	10.67
OP40284-MS	481337	3.39	1669042	4.53	1001206	6.02	1623878	7.26	1534917	9.48	1437551	10.67
OP40284-MSD	468214	3.38	1605016	4.53	964663	6.02	1562439	7.26	1453144	9.48	1386046	10.67
MC34100-7	463181	3.38	1586645	4.52	961408	6.01	1584766	7.25	1527576	9.47	1404810	10.66
ZZZZZZ	456970	3.38	1552295	4.52	833168	6.02	1443871	7.26	1569314	9.48	1543538	10.68
ZZZZZZ	486199	3.38	1663679	4.52	1012019	6.01	1670991	7.25	1609443	9.48	1540309	10.67
ZZZZZZ	453101	3.38	1560054	4.52	949009	6.01	1568407	7.25	1573234	9.49	1542179	10.68
ZZZZZZ	438182	3.38	1522107	4.52	931082	6.01	1538169	7.25	1475159	9.48	1421699	10.67
ZZZZZZ	438704	3.38	1498273	4.52	908655	6.01	1490164	7.25	1406905	9.48	1322852	10.67
ZZZZZZ	439777	3.38	1510720	4.52	938388	6.01	1539150	7.25	1479731	9.48	1412157	10.67
ZZZZZZ	382251	3.38	1307491	4.52	801946	6.01	1318375	7.25	1289747	9.48	1255366	10.67
ZZZZZZ	419763	3.38	1450433	4.52	891176	6.01	1471804	7.25	1400810	9.48	1323768	10.66
ZZZZZZ	486067	3.38	1671733	4.52	1013465	6.01	1680740	7.25	1630797	9.48	1531689	10.67
ZZZZZZ	438816	3.38	1502674	4.52	912836	6.01	1499394	7.25	1430518	9.48	1402652	10.67
ZZZZZZ	459355	3.38	1586024	4.52	961701	6.01	1589510	7.25	1540446	9.47	1451917	10.66
ZZZZZZ	501008	3.38	1699895	4.52	1033164	6.01	1710102	7.25	1640380	9.48	1547021	10.67
ZZZZZZ	412752	3.38	1417145	4.52	852274	6.01	1664357	7.25	1332078	9.48	1346368	10.68
ZZZZZZ	445702	3.38	1521889	4.52	911698	6.01	1453798	7.25	1357781	9.48	1295970	10.67
ZZZZZZ	490199	3.38	1665026	4.52	1000740	6.01	1644331	7.25	1552988	9.48	1495023	10.67
ZZZZZZ	428855	3.38	1469372	4.52	904516	6.01	1512212	7.25	1452794	9.48	1360446	10.67
OP40382-MB	447516	3.38	1524757	4.52	935915	6.01	1541849	7.25	1490060	9.47	1406745	10.66
OP40382-BS	482895	3.38	1647299	4.53	990997	6.02	1606033	7.26	1550273	9.49	1474919	10.67
OP40382-MS	472979	3.39	1622430	4.53	978329	6.02	1572204	7.26	1495668	9.48	1472308	10.67
OP40382-MSD	470764	3.38	1591804	4.53	945413	6.02	1516663	7.26	1434085	9.48	1375943	10.67
MC34200-6	482093	3.38	1634523	4.52	966024	6.01	1581918	7.25	1489876	9.47	1389055	10.66
MC34553-1	501118	3.38	1695198	4.52	1005384	6.01	1641572	7.25	1592815	9.47	1512184	10.66

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

7.4.3

Semivolatile Internal Standard Area Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSR1499-CC1481	Injection Date:	10/31/14
Lab File ID:	R40713.D	Injection Time:	08:02
Instrument ID:	GCMSR	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(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.

7.4.3

7

Semivolatile Surrogate Recovery Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC34553-1	R40741.D	49	33	105	73	80	98
MC34553-2	F77206.D	43	29	86	68	59	93
MC34553-3	F77207.D	33	23	80	57	49	85
MC34553-4	F77208.D	51	35	101	83	72	95
OP40382-BS	R40737.D	46	33	97	71	78	95
OP40382-MB	R40736.D	46	30	92	72	76	99
OP40382-MS	R40738.D	47	35	106	74	82	101
OP40382-MSD	R40739.D	47	34	102	73	82	98

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Fluorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

7.5.1

7

Semivolatile Surrogate Recovery Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34553-1	I92613.D	89	77	84
MC34553-2	I92614.D	79	67	81
MC34553-3	I92615.D	65	56	77
MC34553-4	I92616.D	93	79	85
OP40383-BS	I92609.D	88	76	81
OP40383-MB	I92608.D	87	74	84
OP40383-MS	I92610.D	91	81	85
OP40383-MSD	I92611.D	89	79	82

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40406-MB	BB60078.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340

The QC reported here applies to the following samples: Method: SW846 8011

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	86%	36-173%
460-00-4	Bromofluorobenzene (S)	82%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40406-BS	BB60079.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340

The QC reported here applies to the following samples: Method: SW846 8011

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.036	0.042	118	60-140
106-93-4	1,2-Dibromoethane	0.036	0.035	98	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	89%	36-173%
460-00-4	Bromofluorobenzene (S)	80%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40406-MS	BB60082.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
OP40406-MSD	BB60083.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340
MC34200-11	BB60084.D	1	10/28/14	NK	10/27/14	OP40406	GBB3340

The QC reported here applies to the following samples: Method: SW846 8011

MC34553-1, MC34553-2, MC34553-3, MC34553-4, MC34553-6

CAS No.	Compound	MC34200-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.036	0.057	160* [a]	0.036	0.059	166* [a]	3	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.036	0.044	124	0.036	0.050	140	13	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34200-11	Limits
460-00-4	Bromofluorobenzene (S)	91%	95%	105%	36-173%
460-00-4	Bromofluorobenzene (S)	93%	92%	104%	36-173%

(a) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

8.3.1

8

Volatile Surrogate Recovery Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34553-1	BB60085.D	88	112
MC34553-2	BB60086.D	109	112
MC34553-3	BB60087.D	110	110
MC34553-4	BB60089.D	86	124
MC34553-6	BB60090.D	96	102
OP40406-BS	BB60079.D	89	80
OP40406-MB	BB60078.D	86	82
OP40406-MS	BB60082.D	91	93
OP40406-MSD	BB60083.D	95	92

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

GC Surrogate Retention Time Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3340-ICC3340	Injection Date:	10/28/14
Lab File ID:	BB60074.D	Injection Time:	08:57
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP40407-MB	BB60078A.D	10/28/14	11:09	3.32	3.33
OP40406-MB	BB60078.D	10/28/14	11:09	3.32	3.33
OP40407-BS	BB60079A.D	10/28/14	11:28	3.32	3.33
OP40406-BS	BB60079.D	10/28/14	11:28	3.32	3.33
ZZZZZZ	BB60081.D	10/28/14	12:04	3.33	3.34
OP40406-MS	BB60082.D	10/28/14	12:22	3.32	3.33
OP40406-MSD	BB60083.D	10/28/14	12:40	3.32	3.33
MC34200-11	BB60084.D	10/28/14	12:58	3.32	3.33
MC34553-1	BB60085.D	10/28/14	13:16	3.32	3.33
MC34553-2	BB60086.D	10/28/14	13:33	3.32	3.33
MC34553-3	BB60087.D	10/28/14	13:51	3.32	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

GC Surrogate Retention Time Summary

Job Number: MC34553
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GBB3340-CC3340	Injection Date:	10/28/14
Lab File ID:	BB60088.D	Injection Time:	14:09
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.32	3.33

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC34553-4	BB60089.D	10/28/14	14:27	3.32	3.33
MC34553-6	BB60090.D	10/28/14	14:45	3.32	3.33
GBB3340-ECC334	BB60091.D	10/28/14	15:03	3.32	3.33

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

Roxana Groundwater Quarterly – 4th Quarter 2014 Data Review

Laboratory SDG: MC34842

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 11/18/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2014

Sample Identification	Sample Identification
P93D-ROX-110414	TB-ROX-110414-HCL
TB-ROX-110414-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

Yes

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Yes, the laboratory case narrative indicated VOC LCS/LCSD recoveries and VOC LCS/LCSD RPDs were outside evaluation criteria. VOC MS/MSD recoveries and VOC MS/MSD RPDs were outside evaluation criteria in sample P93D-ROX-110414. Sample P93D-ROX-110414 was diluted due to high levels of VOCs. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein and 1,4-dioxane exceeded 30 percent difference (%D). Also, the continuing calibration verification for acrolein exceeded 40%D. Lastly, continuing calibration check for 1,2-dibromo-3-chloropropane exceeded criteria.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 1.6ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

Yes

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

No

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS/LCSD ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD /RPD Criteria
MSV1318-BS/BSD	VOCs	Acrolein	**146/143**	2	70-130/20
MSV1318-BS/BSD	VOCs	1,4-Dioxane	**178**/118	**41**	70-130/20

Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

Yes

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample P93D-ROX-110414 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery (%)	RPD	MS/MSD/ RPD Criteria
P93D-ROX-110414	VOCs	Acetone	**44/43**	4	70-130/30
P93D-ROX-110414	VOCs	Acrolein	**144**/127	13	70-130/30
P93D-ROX-110414	VOCs	Benzene	**449/419**	6	70-130/30
P93D-ROX-110414	VOCs	2-Butanone (MEK)	74/**69**	6	70-130/30
P93D-ROX-110414	VOCs	1,4-Dioxane	105/**147**	**34**	70-130/30
P93D-ROX-110414	VOCs	2-Hexanone	**62/58**	7	70-130/30
P93D-ROX-110414	VOCs	Naphthalene	**141**/126	11	70-130/30

LCS/LCSD recoveries were within evaluation criteria with the exception of analytes listed and qualified as appropriate in Section 5.0 of this data review. No further qualification of data was required.

8.0 Internal Standard (IS) Recoveries

Were internal standard area recoveries within evaluation criteria?

Yes

9.0 Laboratory Duplicate Results

Were laboratory duplicate samples analyzed as part of this SDG?

No

10.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

No

11.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No

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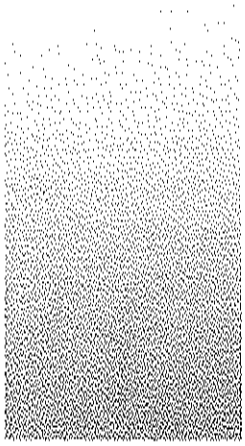
11/10/14



Technical Report for

Shell Oil

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana,

Accutest Job Number: MC34842

Sampling Date: 11/04/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **38**

Reviewed 11/18/14

Reza Pand
Lab Director

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

Client Service contact: Matthew Morrell 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) WI (399080220) DoD ELAP (L-A-B L2235)

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Sample Summary

Shell Oil

Job No: MC34842

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC34842-1	11/04/14	13:15	LRMC	11/05/14	AQ	Ground Water	P93D-ROX-110414
MC34842-2	11/04/14	00:00	LRMC	11/05/14	AQ	Trip Blank Water	TB-ROX-110414-HCL
MC34842-3	11/04/14	00:00	LRMC	11/05/14	AQ	Trip Blank Water	TB-ROX-110414-ST

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2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC34842
Site:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central	Report Date	11/7/2014 2:19:25 PM

1 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 11/04/2014 and were received at Accutest on 11/05/2014 properly preserved, at 1.6 Deg. C and intact. These Samples received an Accutest job number of MC34842. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report. 1-Chlorohexane, Benzenethiol, Dibenz(a,h)acridine, Indene, and Quinoline were searched in the library search and reported only if detections were found.

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 8260C

Matrix: AQ	Batch ID: MSV1318

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC34842-1MS, MC34842-1MSD were used as the QC samples indicated.
- MSV1318-BS for 1,4-Dioxane, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- MC34842-1MS for 2-Hexanone, Acetone, Acrolein, Benzene, Naphthalene are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC34842-1MSD for 2-Butanone (MEK), 2-Hexanone, Acetone, 1,4-Dioxane are outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MC34842-1MSD for 1,4-Dioxane are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.
- RPD(s) for MSV1318-BSD for 1,4-Dioxane: Outside control limits. Blank Spike meets program technical requirements.
- Continuing calibration check standard MSV1318-CC1312 for acrolein exceed 40% Difference (results biased high). Associated samples are non-detect for these compounds.
- Initial calibration verification standard MSV1312-ICV1312 for acrolein, 1,4-dioxane exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.

Volatiles by GC By Method SW846 8011

Matrix: AQ	Batch ID: OP40576

- 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.
- Sample(s) MC34799-8MS, MC34799-8MSD were used as the QC samples indicated.
- Calibration check standard GYZ7664-CC7664 for 1,2-Dibromo-3-chloropropane exceeds criteria (response bias high). Associated samples are non-detect for this compound.

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(MC34842).

Summary of Hits

Job Number: MC34842
Account: Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Collected: 11/04/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC34842-1	P93D-ROX-110414					
Benzene		19900	50	25	ug/l	SW846 8260C
1,2-Dichloropropane		7.9	2.0	0.45	ug/l	SW846 8260C
Ethylbenzene		1.3	1.0	0.25	ug/l	SW846 8260C
Methyl Tert Butyl Ether		2.0	1.0	0.22	ug/l	SW846 8260C
n-Propylbenzene		0.67 J	5.0	0.49	ug/l	SW846 8260C
Toluene		1.8	1.0	0.22	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		0.57 J	5.0	0.30	ug/l	SW846 8260C
MC34842-2	TB-ROX-110414-HCL					
No hits reported in this sample.						
MC34842-3	TB-ROX-110414-ST					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93D-ROX-110414		
Lab Sample ID:	MC34842-1	Date Sampled:	11/04/14
Matrix:	AQ - Ground Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36408.D	1	11/06/14	AMY	n/a	n/a	MSV1318
Run #2	V36414.D	100	11/06/14	AMY	n/a	n/a	MSV1318

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	19900 [a]	50	25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-110414		
Lab Sample ID:	MC34842-1	Date Sampled:	11/04/14
Matrix:	AQ - Ground Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	7.9	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	0.67	5.0	0.49	ug/l	J
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	1.8	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.57	5.0	0.30	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-110414		
Lab Sample ID:	MC34842-1	Date Sampled:	11/04/14
Matrix:	AQ - Ground Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	100%	70-130%
2037-26-5	Toluene-D8	98%	96%	70-130%
460-00-4	4-Bromofluorobenzene	102%	99%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	P93D-ROX-110414		
Lab Sample ID:	MC34842-1	Date Sampled:	11/04/14
Matrix:	AQ - Ground Water	Date Received:	11/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ92090.D	1	11/06/14	NK	11/05/14	OP40576	GYZ7664
Run #2							

	Initial Volume	Final Volume
Run #1	37.6 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	91%		36-173%
460-00-4	Bromofluorobenzene (S)	105%		36-173%

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-110414-HCL		
Lab Sample ID:	MC34842-2	Date Sampled:	11/04/14
Matrix:	AQ - Trip Blank Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V36406.D	1	11/06/14	AMY	n/a	n/a	MSV1318
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-110414-HCL		
Lab Sample ID:	MC34842-2	Date Sampled:	11/04/14
Matrix:	AQ - Trip Blank Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-110414-HCL		
Lab Sample ID:	MC34842-2	Date Sampled:	11/04/14
Matrix:	AQ - Trip Blank Water	Date Received:	11/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	TB-ROX-110414-ST		
Lab Sample ID:	MC34842-3	Date Sampled:	11/04/14
Matrix:	AQ - Trip Blank Water	Date Received:	11/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ92091.D	1	11/06/14	NK	11/05/14	OP40576	GYZ7664
Run #2							

	Initial Volume	Final Volume
Run #1	36.7 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0058	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0058	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	91%		36-173%

ND = Not detected MDL = Method Detection Limit
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

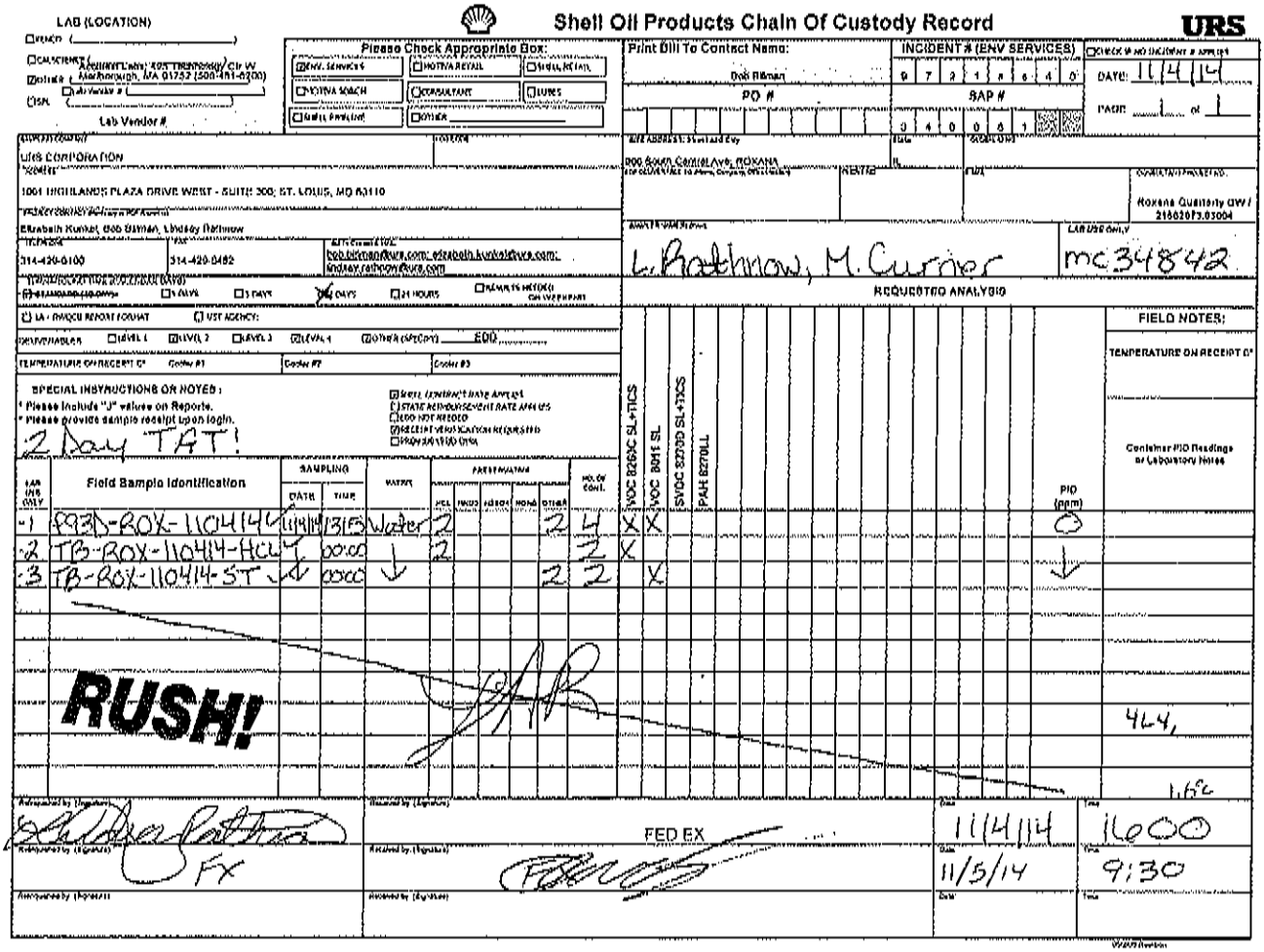
Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ PENCE ( )
☐ CAUSEWAY ( )
☒ OTHER (Accutest Lab, 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☐ ISN (☐ Lab Vendor #)

Lab Vendor #



Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☒ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOACH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bitman

INCIDENT # (ENV SERVICES): 9 7 2 1 8 6 4 0

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 11/4/14

PAGE 1 of 1

PO #

SAP #: 0 4 0 0 8 1

SITE ADDRESS: Street and City: 800 South Central Ave, ROXANA

State: IL

Consultant Project No.: Roxana Quarterly GW / 21602073.03004

Company Name: URS CORPORATION

Address: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

Project Contact Name (Person Receiving Address): Elizabeth Kunkel, Bob Bitman, Lindsay Rathnow

Telephone: 314-429-0100 Fax: 314-429-0462

Attn: bob.bitman@urs.com; elizabeth.kunkel@urs.com; lindsay.rathnow@urs.com

Sampler Name: L. Rathnow, M. Curner

LAB USE ONLY: mc34842

Turnaround Time (Calendar Days): ☒ 5 DAYS ☐ 3 DAYS ☒ 2 DAYS ☐ 24 HOURS ☐ REMARKS NEEDED ON LIVE REPORT

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☒ LEVEL 2 ☐ LEVEL 3 ☒ LEVEL 4 ☒ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES:
* Please include "J" values on Reports.
* Please provide sample receipt upon login.

2 Day TAT!

☒ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☒ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE STUD DATA

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	Sampling Date	Sampling Time	Matrix	Preservation: HCL	HNO3	H2SO4	NONE	OTHER	No. of Cont.	VOC 8260C SL+TICS	VOC 8011 SL	SVOC 8270D SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93D-ROX-110414	11/4/14	1315	Water	2				2	4	X	X			0	
-2	TB-ROX-110414-HCL	↓	00:00	↓	2					2	X				↓	
-3	TB-ROX-110414-ST	↓	00:00	↓					2	2		X			↓	

RUSH!

4L4,

1.6°C

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	11/4/14	1600
Relinquished by (Signature): FX	Received by (Signature): [signature]	11/5/14	9:30
Relinquished by (Signature)	Received by (Signature)	Date	Time

5.1

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MC34842: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC34842 Client: URS Project: 900 SOUTH CENTRAL AVE

Date / Time Received: 11/5/2014 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Initial/Adjusted): #1: (1.6/1.6):

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. Thermometer ID:	G1;
3. Cooler media:	Ice (Bag)
4. No. Coolers:	1

Quality Control Preservation	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 01752
www.accutest.com

5.1

MC34842: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC34842

URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC34842-1 Collected: 04-NOV-14 13:15 By: LRMC Received: 05-NOV-14 By: P93D-ROX-110414						
MC34842-1	SW846 8260C	06-NOV-14 15:26	AMY			V8260SL+
MC34842-1	SW846 8260C	06-NOV-14 18:06	AMY			V8260SL+
MC34842-1	SW846 8011	06-NOV-14 18:52	NK	05-NOV-14	MT	V8011SL
MC34842-2 Collected: 04-NOV-14 00:00 By: LRMC Received: 05-NOV-14 By: TB-ROX-110414-HCL						
MC34842-2	SW846 8260C	06-NOV-14 14:33	AMY			V8260SL+
MC34842-3 Collected: 04-NOV-14 00:00 By: LRMC Received: 05-NOV-14 By: TB-ROX-110414-ST						
MC34842-3	SW846 8011	06-NOV-14 19:09	NK	05-NOV-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL
Received: 11/05/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC34842-1.1	VOC Ref #4	Amy Min Yang	11/06/14 13:36	Retrieve from Storage
MC34842-1.1	Amy Min Yang	GCMSV	11/06/14 13:36	Load on Instrument
MC34842-1.1	GCMSV	Amy Min Yang	11/07/14 15:48	Unload from Instrument
MC34842-1.1	Amy Min Yang	VOC Ref #4	11/07/14 15:49	Return to Storage
MC34842-1.2	VOC Ref #4	Amy Min Yang	11/06/14 15:50	Retrieve from Storage
MC34842-1.2	Amy Min Yang	GCMSV	11/06/14 15:50	Load on Instrument
MC34842-1.2	GCMSV	Amy Min Yang	11/07/14 15:48	Unload from Instrument
MC34842-1.2	Amy Min Yang	VOC Ref #4	11/07/14 15:49	Return to Storage
MC34842-1.3	VOC Ref #4	Marc Tahtamoni	11/05/14 14:16	Retrieve from Storage
MC34842-2.1	VOC Ref #4	Amy Min Yang	11/06/14 13:36	Retrieve from Storage
MC34842-2.1	Amy Min Yang	GCMSV	11/06/14 13:36	Load on Instrument
MC34842-2.1	GCMSV	Amy Min Yang	11/07/14 15:48	Unload from Instrument
MC34842-2.1	Amy Min Yang	VOC Ref #4	11/07/14 15:49	Return to Storage
MC34842-3.2	VOC Ref #4	Marc Tahtamoni	11/05/14 14:16	Retrieve from Storage

New England ACCUTEST LABORATORIES

GC/MS Volatiles

6

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: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-MB	V36404.D	1	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.5	ug/l	
107-02-8	Acrolein	ND	25	6.0	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.1	ug/l	
71-43-2	Benzene	ND	0.50	0.25	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.35	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.47	ug/l	
75-25-2	Bromoform	ND	1.0	0.30	ug/l	
74-83-9	Bromomethane	ND	2.0	0.77	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.5	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	1.1	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.42	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.39	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.23	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.25	ug/l	
75-00-3	Chloroethane	ND	2.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.31	ug/l	
74-87-3	Chloromethane	ND	2.0	0.59	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.38	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.45	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.16	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.31	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.71	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.29	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.44	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.47	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.89	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.47	ug/l	

Method Blank Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-MB	V36404.D	1	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.42	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.38	ug/l	
123-91-1	1,4-Dioxane	ND	25	11	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.7	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.6	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.35	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.22	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.99	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.52	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.39	ug/l	
91-20-3	Naphthalene	ND	5.0	0.69	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.49	ug/l	
100-42-5	Styrene	ND	5.0	0.29	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.43	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.30	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.29	ug/l	
108-88-3	Toluene	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.19	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.40	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.55	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.81	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.30	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.18	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	0.71	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.38	ug/l	
95-47-6	o-Xylene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.30	ug/l	

6.1.1

Method Blank Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-MB	V36404.D	1	11/06/14	AMY	n/a	n/a	MSV1318

6.1.1

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

MC34842-1, MC34842-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	97%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-BS	V36400.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MSV1318-BSD	V36401.D	1	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	41.1	82	41.0	82	0	70-130/20
107-02-8	Acrolein	250	366	146* a	358	143* a	2	70-130/20
107-13-1	Acrylonitrile	50	52.6	105	53.5	107	2	70-130/20
71-43-2	Benzene	50	48.8	98	48.7	97	0	70-130/20
108-86-1	Bromobenzene	50	49.9	100	48.0	96	4	70-130/20
74-97-5	Bromochloromethane	50	48.4	97	48.9	98	1	70-130/20
75-27-4	Bromodichloromethane	50	55.0	110	52.7	105	4	70-130/20
75-25-2	Bromoform	50	52.5	105	52.9	106	1	70-130/20
74-83-9	Bromomethane	50	43.9	88	43.7	87	0	70-130/20
78-93-3	2-Butanone (MEK)	50	45.0	90	45.9	92	2	70-130/20
104-51-8	n-Butylbenzene	50	54.6	109	53.2	106	3	70-130/20
135-98-8	sec-Butylbenzene	50	47.9	96	45.3	91	6	70-130/20
98-06-6	tert-Butylbenzene	50	53.8	108	50.0	100	7	70-130/20
75-15-0	Carbon disulfide	50	51.5	103	52.2	104	1	70-130/20
56-23-5	Carbon tetrachloride	50	50.6	101	53.1	106	5	70-130/20
108-90-7	Chlorobenzene	50	48.2	96	47.8	96	1	70-130/20
75-00-3	Chloroethane	50	49.3	99	49.2	98	0	70-130/20
110-75-8	2-Chloroethyl vinyl ether	50	50.9	102	49.6	99	3	70-130/20
67-66-3	Chloroform	50	46.9	94	46.8	94	0	70-130/20
74-87-3	Chloromethane	50	45.5	91	44.7	89	2	70-130/20
95-49-8	o-Chlorotoluene	50	52.0	104	49.5	99	5	70-130/20
106-43-4	p-Chlorotoluene	50	51.3	103	49.5	99	4	70-130/20
124-48-1	Dibromochloromethane	50	55.0	110	53.1	106	4	70-130/20
95-50-1	1,2-Dichlorobenzene	50	49.5	99	48.8	98	1	70-130/20
541-73-1	1,3-Dichlorobenzene	50	49.5	99	48.4	97	2	70-130/20
106-46-7	1,4-Dichlorobenzene	50	47.5	95	46.2	92	3	70-130/20
75-71-8	Dichlorodifluoromethane	50	49.7	99	49.4	99	1	70-130/20
75-34-3	1,1-Dichloroethane	50	47.3	95	48.5	97	3	70-130/20
107-06-2	1,2-Dichloroethane	50	48.0	96	46.9	94	2	70-130/20
75-35-4	1,1-Dichloroethene	50	51.5	103	52.1	104	1	70-130/20
156-59-2	cis-1,2-Dichloroethene	50	47.5	95	48.5	97	2	70-130/20
156-60-5	trans-1,2-Dichloroethene	50	49.7	99	51.7	103	4	70-130/20
78-87-5	1,2-Dichloropropane	50	52.9	106	51.9	104	2	70-130/20
142-28-9	1,3-Dichloropropane	50	49.7	99	48.8	98	2	70-130/20
594-20-7	2,2-Dichloropropane	50	48.6	97	48.5	97	0	70-130/20
563-58-6	1,1-Dichloropropene	50	54.2	108	54.7	109	1	70-130/20

* = Outside of Control Limits.

6.2.1

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-BS	V36400.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MSV1318-BSD	V36401.D	1	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	61.2	122	59.2	118	3	70-130/20
10061-02-6	trans-1,3-Dichloropropene	50	60.1	120	59.5	119	1	70-130/20
123-91-1	1,4-Dioxane	125	223	178* a	147	118	41* a	70-130/20
97-63-2	Ethyl methacrylate	50	44.3	89	44.3	89	0	77-137/20
100-41-4	Ethylbenzene	50	50.7	101	50.3	101	1	70-130/20
87-68-3	Hexachlorobutadiene	50	52.7	105	51.9	104	2	70-130/20
591-78-6	2-Hexanone	50	40.1	80	40.5	81	1	70-130/20
98-82-8	Isopropylbenzene	50	56.7	113	53.2	106	6	70-130/20
99-87-6	p-Isopropyltoluene	50	47.6	95	45.4	91	5	70-130/20
1634-04-4	Methyl Tert Butyl Ether	50	46.8	94	48.1	96	3	70-130/20
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.5	95	47.4	95	0	70-130/20
74-95-3	Methylene bromide	50	53.0	106	51.1	102	4	70-130/20
75-09-2	Methylene chloride	50	46.7	93	47.3	95	1	70-130/20
91-20-3	Naphthalene	50	59.1	118	61.5	123	4	70-130/20
103-65-1	n-Propylbenzene	50	48.6	97	46.4	93	5	70-130/20
100-42-5	Styrene	50	51.4	103	51.7	103	1	70-130/20
630-20-6	1,1,1,2-Tetrachloroethane	50	50.5	101	50.2	100	1	70-130/20
79-34-5	1,1,2,2-Tetrachloroethane	50	53.7	107	51.1	102	5	70-130/20
127-18-4	Tetrachloroethene	50	48.3	97	46.9	94	3	70-130/20
108-88-3	Toluene	50	48.9	98	47.5	95	3	70-130/20
87-61-6	1,2,3-Trichlorobenzene	50	63.1	126	65.1	130	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	58.0	116	59.0	118	2	70-130/20
71-55-6	1,1,1-Trichloroethane	50	49.1	98	50.0	100	2	70-130/20
79-00-5	1,1,2-Trichloroethane	50	54.5	109	52.2	104	4	70-130/20
79-01-6	Trichloroethene	50	47.9	96	46.6	93	3	70-130/20
75-69-4	Trichlorofluoromethane	50	39.5	79	39.4	79	0	70-130/20
96-18-4	1,2,3-Trichloropropane	50	38.2	76	44.3	89	15	70-130/20
95-63-6	1,2,4-Trimethylbenzene	50	50.9	102	48.6	97	5	70-130/20
108-67-8	1,3,5-Trimethylbenzene	50	57.1	114	53.7	107	6	70-130/20
108-05-4	Vinyl Acetate	50	47.9	96	47.2	94	1	70-130/20
75-01-4	Vinyl chloride	50	46.1	92	45.2	90	2	70-130/20
	m,p-Xylene	100	100	100	99.1	99	1	70-130/20
95-47-6	o-Xylene	50	50.5	101	49.9	100	1	70-130/20
1330-20-7	Xylene (total)	150	151	101	149	99	1	70-130/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1318-BS	V36400.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MSV1318-BSD	V36401.D	1	11/06/14	AMY	n/a	n/a	MSV1318

6.2.1

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

MC34842-1, MC34842-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	70-130%
2037-26-5	Toluene-D8	103%	102%	70-130%
460-00-4	4-Bromofluorobenzene	99%	97%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34842-1MS	V36411.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1MSD	V36412.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36408.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36414.D	100	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Compound	MC34842-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		5000	2220	44* a	5000	2130	43* a	4	70-130/30
107-02-8	Acrolein	ND		25000	36100	144* a	25000	31800	127	13	70-130/30
107-13-1	Acrylonitrile	ND		5000	5510	110	5000	5010	100	10	70-130/30
71-43-2	Benzene	19900 b		5000	25200	449* a	5000	23700	419* a	6	70-130/30
108-86-1	Bromobenzene	ND		5000	5040	101	5000	5050	101	0	70-130/30
74-97-5	Bromochloromethane	ND		5000	5080	102	5000	4720	94	7	70-130/30
75-27-4	Bromodichloromethane	ND		5000	5260	105	5000	5150	103	2	70-130/30
75-25-2	Bromoform	ND		5000	5180	104	5000	5020	100	3	70-130/30
74-83-9	Bromomethane	ND		5000	4260	85	5000	3980	80	7	70-130/30
78-93-3	2-Butanone (MEK)	ND		5000	3680	74	5000	3470	69* a	6	70-130/30
104-51-8	n-Butylbenzene	ND		5000	5490	110	5000	5430	109	1	70-130/30
135-98-8	sec-Butylbenzene	ND		5000	4680	94	5000	4680	94	0	70-130/30
98-06-6	tert-Butylbenzene	ND		5000	5150	103	5000	5290	106	3	70-130/30
75-15-0	Carbon disulfide	ND		5000	5250	105	5000	4930	99	6	70-130/30
56-23-5	Carbon tetrachloride	ND		5000	5220	104	5000	4810	96	8	70-130/30
108-90-7	Chlorobenzene	ND		5000	5000	100	5000	4890	98	2	70-130/30
75-00-3	Chloroethane	ND		5000	4950	99	5000	4420	88	11	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		5000	4420	88	5000	4040	81	9	70-130/30
67-66-3	Chloroform	ND		5000	4830	97	5000	4500	90	7	70-130/30
74-87-3	Chloromethane	ND		5000	4490	90	5000	4070	81	10	70-130/30
95-49-8	o-Chlorotoluene	ND		5000	5210	104	5000	5180	104	1	70-130/30
106-43-4	p-Chlorotoluene	ND		5000	5170	103	5000	5150	103	0	70-130/30
124-48-1	Dibromochloromethane	ND		5000	5290	106	5000	5250	105	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		5000	5010	100	5000	4930	99	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		5000	5020	100	5000	4980	100	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		5000	4800	96	5000	4720	94	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		5000	5010	100	5000	4620	92	8	70-130/30
75-34-3	1,1-Dichloroethane	ND		5000	5050	101	5000	4660	93	8	70-130/30
107-06-2	1,2-Dichloroethane	ND		5000	4810	96	5000	4530	91	6	70-130/30
75-35-4	1,1-Dichloroethene	ND		5000	5350	107	5000	5000	100	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		5000	5120	102	5000	4700	94	9	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		5000	5390	108	5000	5010	100	7	70-130/30
78-87-5	1,2-Dichloropropane	7.9		5000	5440	109	5000	5200	104	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		5000	5150	103	5000	5010	100	3	70-130/30
594-20-7	2,2-Dichloropropane	ND		5000	4910	98	5000	4680	94	5	70-130/30
563-58-6	1,1-Dichloropropene	ND		5000	5750	115	5000	5300	106	8	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34842-1MS	V36411.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1MSD	V36412.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36408.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36414.D	100	11/06/14	AMY	n/a	n/a	MSV1318

6.3.1

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

MC34842-1, MC34842-2

CAS No.	Compound	MC34842-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		5000	6140	123	5000	6010	120	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		5000	6200	124	5000	5930	119	4	70-130/30
123-91-1	1,4-Dioxane	ND		12500	13100	105	12500	18400	147* a	84* c	70-130/30
97-63-2	Ethyl methacrylate	ND		5000	4810	96	5000	4490	90	7	72-139/30
100-41-4	Ethylbenzene	1.3		5000	5230	105	5000	5120	102	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		5000	5230	105	5000	5350	107	2	70-130/30
591-78-6	2-Hexanone	ND		5000	3090	62* a	5000	2890	58* a	7	70-130/30
98-82-8	Isopropylbenzene	ND		5000	5550	111	5000	5570	111	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		5000	4730	95	5000	4690	94	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	2.0		5000	5070	101	5000	4750	95	7	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5000	4860	97	5000	4410	88	10	70-130/30
74-95-3	Methylene bromide	ND		5000	5330	107	5000	5040	101	6	70-130/30
75-09-2	Methylene chloride	ND		5000	4930	99	5000	4590	92	7	70-130/30
91-20-3	Naphthalene	ND		5000	7050	141* a	5000	6310	126	11	70-130/30
103-65-1	n-Propylbenzene	0.67	J	5000	4890	98	5000	4880	98	0	70-130/30
100-42-5	Styrene	ND		5000	5400	108	5000	5250	105	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		5000	4930	99	5000	4870	97	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		5000	5510	110	5000	5330	107	3	70-130/30
127-18-4	Tetrachloroethene	ND		5000	4850	97	5000	4840	97	0	70-130/30
108-88-3	Toluene	1.8		5000	4990	100	5000	4850	97	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		5000	5910	118	5000	6340	127	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		5000	5930	119	5000	5930	119	0	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		5000	4990	100	5000	4770	95	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		5000	5560	111	5000	5260	105	6	70-130/30
79-01-6	Trichloroethene	ND		5000	4760	95	5000	4670	93	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		5000	3870	77	5000	3540	71	9	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		5000	3860	77	5000	3700	74	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	0.57	J	5000	5270	105	5000	5100	102	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		5000	5630	113	5000	5630	113	0	70-130/30
108-05-4	Vinyl Acetate	ND		5000	4900	98	5000	4640	93	5	70-130/30
75-01-4	Vinyl chloride	ND		5000	4510	90	5000	4180	84	8	70-130/30
	m,p-Xylene	ND		10000	10400	104	10000	10200	102	2	70-130/30
95-47-6	o-Xylene	ND		5000	5190	104	5000	5050	101	3	70-130/30
1330-20-7	Xylene (total)	ND		15000	15600	104	15000	15200	101	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC34842-1MS	V36411.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1MSD	V36412.D	100	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36408.D	1	11/06/14	AMY	n/a	n/a	MSV1318
MC34842-1	V36414.D	100	11/06/14	AMY	n/a	n/a	MSV1318

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

MC34842-1, MC34842-2

CAS No.	Surrogate Recoveries	MS	MSD	MC34842-1	MC34842-1	Limits
1868-53-7	Dibromofluoromethane	99%	97%	109%	100%	70-130%
2037-26-5	Toluene-D8	103%	102%	98%	96%	70-130%
460-00-4	4-Bromofluorobenzene	100%	100%	102%	99%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) Result is from Run #2.
(c) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	MSV1318-CC1312	Injection Date:	11/06/14
Lab File ID:	V36400.D	Injection Time:	11:52
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	902444	6.57	1468979	7.75	670729	11.08	774502	13.29	72522	3.53
Upper Limit [a]	1804888	7.07	2937958	8.25	1341458	11.58	1549004	13.79	145044	4.03
Lower Limit [b]	451222	6.07	734490	7.25	335365	10.58	387251	12.79	36261	3.03
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1318-BS	902444	6.57	1468979	7.75	670729	11.08	774502	13.29	72522	3.53
MSV1318-BSD	899440	6.57	1394135	7.75	640422	11.08	781355	13.29	72243	3.54
MSV1318-MB	791572	6.57	1291129	7.75	551188	11.09	682746	13.30	60983	3.54
ZZZZZZ	772019	6.57	1271403	7.75	581549	11.09	666746	13.30	58580	3.53
MC34842-2	725791	6.58	1219221	7.76	572048	11.09	664053	13.30	59904	3.54
ZZZZZZ	755673	6.58	1251729	7.76	572117	11.09	657524	13.30	57961	3.54
MC34842-1	782257	6.58	1331673	7.76	604674	11.09	665159	13.30	64343	3.54
ZZZZZZ	769446	6.58	1321373	7.76	586982	11.09	677183	13.30	62226	3.54
ZZZZZZ	855317	6.58	1357431	7.76	659047	11.09	769247	13.30	115856	3.54
MC34842-1MS	909361	6.58	1407776	7.76	659245	11.09	787059	13.30	79433	3.55
MC34842-1MSD	924308	6.58	1491343	7.76	676144	11.09	786829	13.30	76192	3.55
ZZZZZZ	867781	6.58	1387493	7.76	616086	11.09	750781	13.30	79019	3.54
MC34842-1	873051	6.59	1413221	7.77	615467	11.09	715278	13.30	74076	3.55
ZZZZZZ	803207	6.59	1347461	7.77	622226	11.09	702971	13.30	72909	3.55
ZZZZZZ	812634	6.59	1237409	7.77	565844	11.10	665703	13.31	64714	3.55
ZZZZZZ	787308	6.59	1326454	7.77	591067	11.10	670818	13.31	66385	3.55
ZZZZZZ	745791	6.59	1226094	7.77	527542	11.10	648486	13.31	63091	3.55
ZZZZZZ	731849	6.59	1228524	7.77	561870	11.10	644824	13.31	66630	3.56
ZZZZZZ	725237	6.60	1216418	7.77	569520	11.10	641999	13.31	60764	3.56
ZZZZZZ	719271	6.60	1232184	7.77	542107	11.10	636915	13.31	59222	3.56
ZZZZZZ	760834	6.60	1248501	7.78	566679	11.10	647209	13.31	57337	3.56
ZZZZZZ	740276	6.60	1257976	7.78	565249	11.10	643416	13.31	56634	3.56
ZZZZZZ	754524	6.60	1215956	7.77	495590	11.10	600435	13.31	54426	3.55

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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC34842-1	V36414.D	100	96	99
MC34842-1	V36408.D	109	98	102
MC34842-2	V36406.D	108	101	99
MC34842-1MS	V36411.D	99	103	100
MC34842-1MSD	V36412.D	97	102	100
MSV1318-BS	V36400.D	100	103	99
MSV1318-BSD	V36401.D	100	102	97
MSV1318-MB	V36404.D	106	95	97

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

6.5.1

New England ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40576-MB	YZ92081.D	1	11/06/14	NK	11/06/14	OP40576	GYZ7664

The QC reported here applies to the following samples: Method: SW846 8011

MC34842-1, MC34842-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	117%	36-173%
460-00-4	Bromofluorobenzene (S)	134%	36-173%

7.1.1

7

Blank Spike Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40576-BS	YZ92082.D	1	11/06/14	NK	11/06/14	OP40576	GYZ7664

The QC reported here applies to the following samples: Method: SW846 8011

MC34842-1, MC34842-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.079	111	60-140
106-93-4	1,2-Dibromoethane	0.071	0.085	120	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	111%	36-173%
460-00-4	Bromofluorobenzene (S)	134%	36-173%

7.2.1

7

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40576-MS	YZ92083.D	1	11/06/14	NK	11/06/14	OP40576	GYZ7664
OP40576-MSD	YZ92084.D	1	11/06/14	NK	11/06/14	OP40576	GYZ7664
MC34799-8	YZ92085.D	1	11/06/14	NK	11/06/14	OP40576	GYZ7664

The QC reported here applies to the following samples: Method: SW846 8011

MC34842-1, MC34842-3

7.3.1

7

CAS No.	Compound	MC34799-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.077	108	0.071	0.078	110	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.088	124	0.071	0.092	130	4	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC34799-8	Limits
460-00-4	Bromofluorobenzene (S)	117%	120%	117%	36-173%
460-00-4	Bromofluorobenzene (S)	138%	139%	133%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Method: SW846 8011 Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC34842-1	YZ92090.D	91	105
MC34842-3	YZ92091.D	80	91
OP40576-BS	YZ92082.D	111	134
OP40576-MB	YZ92081.D	117	134
OP40576-MS	YZ92083.D	117	138
OP40576-MSD	YZ92084.D	120	139

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

7.4.1

7

GC Surrogate Retention Time Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7664-CC7664	Injection Date:	11/06/14
Lab File ID:	YZ92075.D	Injection Time:	14:46
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.44	3.61

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ92076.D	11/06/14	15:02	3.44	3.61
ZZZZZZ	YZ92077.D	11/06/14	15:19	3.44	3.61
ZZZZZZ	YZ92078.D	11/06/14	15:35	3.44	3.61
ZZZZZZ	YZ92079.D	11/06/14	15:52	3.44	3.61
ZZZZZZ	YZ92080.D	11/06/14	16:08	3.44	3.61
OP40576-MB	YZ92081.D	11/06/14	16:25	3.44	3.61
OP40606-MB	YZ92081A.D	11/06/14	16:25	3.44	3.61
OP40576-BS	YZ92082.D	11/06/14	16:41	3.44	3.61
OP40606-BS	YZ92082A.D	11/06/14	16:41	3.44	3.61
OP40576-MS	YZ92083.D	11/06/14	16:57	3.44	3.61
OP40606-MS	YZ92083A.D	11/06/14	16:57	3.44	3.61
OP40606-MSD	YZ92084A.D	11/06/14	17:14	3.44	3.61
OP40576-MSD	YZ92084.D	11/06/14	17:14	3.44	3.61
MC34799-8	YZ92085.D	11/06/14	17:30	3.44	3.61
MC34799-14	YZ92085A.D	11/06/14	17:30	3.44	3.61

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

7.5.1

7

GC Surrogate Retention Time Summary

Job Number: MC34842
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 4Q14 GW/ 21562973.03004 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7664-CC7664	Injection Date:	11/06/14
Lab File ID:	YZ92086.D	Injection Time:	17:46
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.44	3.61

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ92087.D	11/06/14	18:03	3.44	3.61
ZZZZZZ	YZ92088.D	11/06/14	18:19	3.44	3.61
ZZZZZZ	YZ92089.D	11/06/14	18:36	3.44	3.61
MC34842-1	YZ92090.D	11/06/14	18:52	3.44	3.61
MC34842-3	YZ92091.D	11/06/14	19:09	3.44	3.61
ZZZZZZ	YZ92092.D	11/06/14	19:25	3.44	3.61
ZZZZZZ	YZ92093.D	11/06/14	19:42	3.44	3.61
ZZZZZZ	YZ92094.D	11/06/14	19:58	3.44	3.61
ZZZZZZ	YZ92095.D	11/06/14	20:15	3.44	3.61
ZZZZZZ	YZ92096.D	11/06/14	20:32	3.44	3.61

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

7.5.2