URS

April 3, 2014

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

Subject: **Groundwater Monitoring Report – 1st 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, 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.

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

Sincerely,

URS Corporation, on behalf of Shell Oil Products US

Wendy Pennington
Environmental Engineer

Robert B. Billman
Senior Project Manager

Enclosures: RCRA Facility Groundwater, Leachate and Gas Reporting Form
and report (original plus 2 copies)

Cc: Kevin Dyer, SOPUS
Marty Reynolds, Village of Roxana
Eric Petersen, Phillips 66
Amy Boley, IEPA, Springfield
Gina Search, IEPA, Collinsville
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Illinois Environmental Protection Agency

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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)

1 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)

_____

_____

REPORT

INTERIM GROUNDWATER MONITORING PROGRAM – 1ST QUARTER 2014

Roxana, Illinois

Prepared for:

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

April 2014

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URS Corporation (URS) is submitting this report on behalf of Shell Oil Products US (SOPUS) for the 1st Quarter 2014 (1Q14) 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, has 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 changed in gauging frequencies for wells in the Interim Groundwater Monitoring Program. The list of wells to be gauged on a weekly basis was reduced, but a new list of wells to be gauged on a monthly basis was instituted. 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 laid out by the IEPA. The additional reporting requirements were first incorporated in the 3Q13 report. Groundwater samples were collected and analyzed during 1Q14 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 1Q14 as part of the interim monitoring well network.

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

2.1 ADDITIONAL ACTIVITIES OR MODIFICATIONS

The following additional work activities or modifications were conducted in the 1Q14 sampling event:

- A notification letter, dated January 13, 2014, was submitted to the IEPA stating that no routine gauging activities were performed during the week of January 6, 2014, due to safety concerns associated with inclement weather (i.e., snow accumulation of over 1 foot and subzero temperatures and wind chills).
- Bottom depths were gauged for groundwater monitoring wells in the Roxana Interim Groundwater Monitoring Program that do not have dedicated groundwater pumps[3]. At this time, none of these wells require redevelopment.
- The well pad for groundwater monitoring well MW-24, located on 4th Street near Route 111 in the Village, was damaged, which prevented access to this monitoring well. The surface completion for this well was replaced on January 30, 2014.
- Groundwater monitoring wells MW-1, MW-3, MW-9, and ROST-3-MW were resampled for semi-volatile organic compounds (SVOCs) on February 13, 2014, due to low acid-fraction surrogate recovery from the initial sample. Both sets of data are included in this report and discussed further in **Section 3.2**.

2.2 GROUNDWATER MONITORING WELL GAUGING AND SAMPLING

Groundwater Monitoring Well Gauging

Due to inclement weather at the beginning of January, the comprehensive quarterly groundwater monitoring gauging event took place at the beginning of February, and Roxana monthly gauging was performed in January. The comprehensive quarterly groundwater monitoring well gauging event was conducted between February 10 and 13, 2014. The 1Q14 gauging activities were conducted in conjunction with the 1Q14 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

[3] Groundwater monitoring wells within the Roxana Interim Groundwater Monitoring Program that have dedicated pumps include: P-93A, P-93B, P-93C, and P-114.

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 1Q14 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 January 14 through February 3, 2014. Groundwater monitoring well confirmation samples were collected from MW-1, MW-3, MW-9, and ROST-3-MW on February 13, 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, 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[4]. 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 (ORP)) were

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

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 groundwater samples were collected for VOC and semivolatile 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 field data sheets are included in **Appendix A**.

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,* dated January 1, 2014 – June 30, 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 1Q14 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 using isopropyl alcohol. 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, and MW-8 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 disposed 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 B**.

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. The State of New York is no longer certifying for non-current versions of EPA methodology; therefore, Accutest has switched over to analyzing using 8260C; Accutest is no longer using 8260B. Similarly, Accutest has switched over to using the most current published version for 8270, USEPA Method 8270D. Quality control requirements for USEPA Methods 8260C and 8270D are at least as stringent as those of USEPA Methods 8260B and 8270C, respectively.

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, 2008). 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 the data table and the laboratory results in **Appendix B**. 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;
- 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 1Q14 groundwater gauging and sampling event.

3.1 GROUNDWATER MONITORING WELL GAUGING RESULTS

Comprehensive quarterly groundwater monitoring well gauging for the 1Q14 event was conducted between February 10 and 13, 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 of Roxana have dropped approximately 1 to 3 feet since 4Q13. Groundwater levels in most wells in the WRR have also dropped approximately 1 to 3 feet since 4Q13. Water levels, however, continue to be above the top of the screens in many of the wells gauged during the 1Q14 event. The potentiometric surface observed during the 1Q14 groundwater monitoring well gauging (**Figures 3a and 3b**) illustrates groundwater flow toward the WRR groundwater depression wells.

Perched groundwater was evaluated in the Village and in the WRR along the West Fenceline during 1Q14. During the 1Q14 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 1Q14 gauging results for perched groundwater monitoring wells and piezometers can be found in **Table 1a**.

During the 1Q14 groundwater monitoring well gauging event, LNAPL was detected in four Roxana Interim Groundwater Monitoring Program groundwater monitoring wells (P-55, P-60, P-60-S, and P-68) that are located in the WRR **(Table 1a)**. LNAPL thicknesses ranged from 0.11 to 0.38 feet. Of the four groundwater monitoring wells, LNAPL was observed above the top of the groundwater monitoring well screen in P-68. LNAPL was observed within the screened intervals of P-55, P-60, and P-60-S. During the weekly and monthly gauging events throughout the 1Q14, LNAPL was detected in four groundwater monitoring wells located in the WRR (P-55, P-60, P-60-S, and P-68) and one groundwater monitoring well located in the Village of Roxana (ROST-4-PZ(E)). This routine gauging data can be found in **Table 1b**. LNAPL thickness in well P-55 was observed throughout the 1Q14 to be between 0.70 and 0.10 feet. LNAPL thickness in well P-60 was observed most weeks throughout the 1Q14 to be between 0.02 and 1.11 feet. LNAPL thickness in well P-60-S was observed throughout the 1Q14 to be between 0.14 and 1.30 feet. LNAPL thickness in well P-68 was observed throughout 1Q14 to be between 0.07 and 0.40 feet. LNAPL thickness in well ROST-4-PZ(E) was observed during one week of 1Q14 and was 0.02 feet.

LNAPL observed in groundwater monitoring wells located on the WRR property was removed for on-site reprocessing by P66. Removal of LNAPL, if observed, in the Village and WRR is

conducted during quarterly, monthly, and weekly gauging events. **Figures 4a and 4b** illustrate the measured LNAPL thickness observed during the 1Q14 gauging event.

3.2 DATA QUALITY REVIEW RESULTS

A total of thirteen sample delivery groups (SDGs) were prepared and sent to Accutest Laboratories in Marlborough, MA for the 1Q14 event. Forty-one different groundwater sample sets were prepared and analyzed for VOCs and SVOCs (including PAHs). This included 33 different investigative sample sets, 4 field duplicate sets, and 2 matrix spike/matrix spike duplicate (MS/MSD) sets. These SDGs are presented in **Appendix B**.

Trip blanks (TBs), equipment blanks (EBs), and laboratory method blanks were collectively 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 thirteen TB sets were analyzed for groundwater VOCs.

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 B**. SVOC samples MW1-ROX-011414, MW9-ROX-011414, MW3-ROX-011614, and ROST3MW-ROX-011714 (collected the week of January 13, 2014) were associated with low acid-fraction surrogate recoveries. The monitoring wells associated with these low acid-fraction surrogate recoveries were re-sampled on February 13, 2014, and the associated acid-fraction surrogate recoveries were reproducibly low for the investigative re-samples (SDG MC28321). An equipment blank, associated with MW9, was collected during both the original and re-sampling events; associated acid-fraction surrogate recoveries for these equipment blanks were within acceptance criteria. Recoveries for acid-fraction surrogate recoveries were found reproducibly low in the investigative re-samples, indicating possible matrix interference. Re-sample results were reviewed, however, not qualified. Results were reported from the original sampling event. Additional information is provided in the data reviews and validation reports in **Appendix B**.

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. The laboratory analytical results for the groundwater samples collected during this event are presented in **Table 3**.

The following compounds were reported at concentrations at or above the laboratory reporting limit in groundwater samples during the 1Q14 sampling event. Italic font denotes constituent detected for the first time.

VOCs	
Acetone	Isopropylbenzene (Cumene)
Benzene	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)
2-Butanone	Methyl tert-Butyl Ether (MTBE)
n-Butylbenzene	Naphthalene[5]
sec-Butylbenzene	n-Propylbenzene
tert-Butylbenzene	Toluene
Cymene (p-Isopropyltoluene)	1,2,4-Trimethylbenzene
1,1-Dichloroethane	1,3,5-Trimethylbenzene
1,2-Dichloropropane	m,p-Xylene
Ethylbenzene	o-Xylenes
2-Hexanone (Methyl N-Butyl Ketone)	Xylenes (total)

SVOCs	
Acenaphthene	1-Methylnaphthalene
Acenaphthylene	2-Methylnaphthalene
Anthracene	2-Methylphenol (o-Cresol)
bis(2-Ethylhexyl)phthalate	3&4-Methylphenol (m&p-Cresol)
2,4-Dimethylphenol	Phenanthrene
Fluoranthene	Phenol
Fluorene	Pyrene

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

Two VOCs (1,1-dichloroethane and 1,2-dichloropropane) were detected in this event but were not detected in past events. 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[6]. These concentration limits include the recently updated (October 5, 2012) 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**. IEPA published screening values were not available for the following detected VOCs: acetone, sec-butylbenzene, tert-butylbenzene, cymene (p-isopropyltoluene), and 1,2,4-trimethylbenzene.

Laboratory analytical results for the following VOCs exceeded their respective groundwater screening criteria in one or more samples this event: benzene, ethylbenzene, MTBE, naphthalene, toluene, and 1,3,5-trimethylbenzene. The laboratory analytical results for the following SVOCs exceeded their respective groundwater screening criteria in one or more samples this event: 2,4-dimethylphenol, 2-methylnaphthalene, and phenol. The analytical results from these groundwater samples are on **Table 3**. **Figure 5** presents concentrations of analytes that exceeded the indicated screening criteria for 1Q14.

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 1Q14 Roxana Interim Groundwater Monitoring Program and the following conclusions are based on the data and information collected as part of this program.

- During 1Q14, 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 to 3 feet lower than in the previous quarter. Groundwater levels observed in the WRR were also approximately 1 to 3 feet lower 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,

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

groundwater sampling could not be performed because slow recharge, insufficient amounts of water, or lack of water prevented sampling per the SOP.

- The analytical results from 1Q14 are generally similar to 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.

Illinois Environmental Protection Agency (IEPA), 2011 (IEPA, 2011a); *Corrective Action Letter for the West Fenceline*. Issued to Shell Oil Products US (SOPUS) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated June 16, 2011.

Illinois Environmental Protection Agency (IEPA), 2011 (IEPA, 2011b); *RCRA Response to Groundwater for Second Quarter 2011*. Issued to Shell Oil Products US (SOPUS) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated August 31, 2011.

Illinois Environmental Protection Agency (IEPA), 2012 (IEPA, 2012a); *Letter (CA-24) in response to ROST-4-PZ Delineation and Sampling Report.* Issued to Shell Oil Products US (SOPUS), dated March 14, 2012.

Illinois Environmental Protection Agency (IEPA), 2012 (IEPA, 2012b); *Letter (CA-25) in Response to Agency Comments Provided in June 16, 2011 Letter.* Issued to Shell Oil Products US (SOPUS), dated March 14, 2012.

Illinois Environmental Protection Agency (IEPA), 2013 (IEPA, 2013a); *Hazardous Waste Management RCRA Post-Closure Permit*. Issued to Shell Oil Products US (SOPUS) at the WRB Refining LP (WRB) Wood River Refinery (WRR), issued September 23, 2010; effective October 28, 2010; modified April 2, 2013.

Illinois Environmental Protection Agency (IEPA), 2013 (IEPA, 2013b); *Approval with Conditions for the Roxana 4Q10 and 2Q12 Groundwater Monitoring Program Reports.* Issued to Shell Oil Products US (SOPUS) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated April 8, 2013.

Illinois Environmental Protection Agency (IEPA), 2013 (IEPA, 2013c); *Response to Submittals received February 8, 2012; November 14, 2012; January 25, 2013; and March 14, 2013*.

Issued to Shell Oil Products US (SOPUS) and WRB Refining LP (WRB) Wood River Refinery (WRR), dated July 18, 2013.

URS Corporation (URS), 2013 (URS, 2014); *Route 111/Rand Avenue Vicinity Investigation Health and Safety Plan – Roxana, Illinois*; Prepared for Shell Oil Products US (SOPUS); dated January 1, 2014 – June 30, 2014.

URS Corporation (URS), 2013; *Response to IEPA Letter April 8, 2013 – Groundwater Conditions near East 3rd and Chaffer Streets, Roxana, Illinois*; Prepared for Shell Oil Products US (SOPUS); dated July 29, 2013.

URS Corporation (URS), 2014; *Perched Groundwater Monitoring Request for Abandonment*; Prepared for Shell Oil Products US (SOPUS); dated January 14, 2014.

URS Corporation (URS), 2014; *Perched Groundwater Monitoring Locations*; Prepared for Shell Oil Products US (SOPUS); dated January 14, 2014.

US Environmental Protection Agency (USEPA), June 2008 (USEPA, 2008); *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*

SEE LAST PAGE OF TABLE FOR NOTES

Table 1a
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											
2Q11	442.86	4/25/2011	NE	38.38	NA	NA	NA	404.48	399.45 - 384.45 (43.41 - 58.41)	NA	*
3Q11		7/5/2011	NE	35.77	NA	NA	NA	407.09		NA	*
4Q11		10/5/2011	NE	35.48	NA	NA	NA	407.38		NA	*
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	*
MW-02											
2Q11	443.93	4/25/2011	NE	39.61	NA	NA	NA	404.32	396.74 - 381.74 (47.19 - 62.19)	NA	*
3Q11		7/5/2011	NE	37.04	NA	NA	NA	406.89		NA	*
4Q11		10/5/2011	NE	36.65	NA	NA	NA	407.28		NA	*
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	*
MW-03											
2Q11	430.36	4/25/2011	NE	25.42	NA	NA	NA	404.94	399.38 - 384.38 (30.98 - 45.98)	NA	*
3Q11		7/5/2011	NE	22.72	NA	NA	NA	407.64		NA	*
4Q11		10/5/2011	NE	22.76	NA	NA	NA	407.60		NA	*
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	*
MW-04											
2Q11	441.58	4/25/2011	NE	36.74	NA	NA	NA	404.84	398.95 - 383.95 (42.63 - 57.63)	NA	*
3Q11		7/5/2011	NE	34.15	NA	NA	NA	407.43		NA	*
4Q11		10/5/2011	NE	33.99	NA	NA	NA	407.59		NA	*
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	*
MW-05											
2Q11	429.73	4/25/2011	NE	24.65	NA	NA	NA	405.08	398.60 - 383.60 (31.13 - 46.13)	NA	*
3Q11		7/5/2011	NE	22.00	NA	NA	NA	407.73		NA	*
4Q11		10/5/2011	NE	22.06	NA	NA	NA	407.67		NA	*
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	*

Table 1a
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-06A											
2Q11	432.42	4/25/2011	NE	26.78	NA	NA	NA	405.64	400.44 - 385.44 (31.98 - 46.98)	NA	*
3Q11		7/5/2011	NE	24.21	NA	NA	NA	408.21		NA	*
4Q11		10/5/2011	NE	24.44	NA	NA	NA	407.98		NA	*
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	*
MW-06B											
2Q11	432.29	4/25/2011	NE	26.65	NA	NA	NA	405.64	368.24 - 363.24 (64.05 - 69.05)	NA	*
3Q11		7/5/2011	NE	24.08	NA	NA	NA	408.21		NA	*
4Q11		10/5/2011	NE	24.28	NA	NA	NA	408.01		NA	*
1Q12		1/3/2012	NE	26.40	NA	NA	NA	405.89		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	*
MW-06C											
2Q11	432.11	4/25/2011	NE	26.73	NA	NA	NA	405.38	347.16 - 342.16 (84.95 - 89.95)	NA	*
3Q11		7/5/2011	NE	23.80	NA	NA	NA	408.31		NA	*
4Q11		10/5/2011	NE	24.03	NA	NA	NA	408.08		NA	*
1Q12		1/3/2012	NE	26.17	NA	NA	NA	405.94		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	*
MW-06D											
2Q11	431.99	4/25/2011	NE	26.30	NA	NA	NA	405.69	327.27 - 322.27 (104.72 - 109.72)	NA	*
3Q11		7/5/2011	NE	23.67	NA	NA	NA	408.32		NA	*
4Q11		10/5/2011	NE	23.95	NA	NA	NA	408.04		NA	*
1Q12		1/3/2012	NE	26.05	NA	NA	NA	405.94		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	*
MW-07											
2Q11	443.10	4/25/2011	NE	38.18	NA	NA	NA	404.92	400.18 - 390.18 (42.92 - 52.92)	NA	*
3Q11		7/5/2011	NE	35.65	NA	NA	NA	407.45		NA	*
4Q11		10/5/2011	NE	25.52	NA	NA	NA	417.58		NA	*
1Q12		1/3/2012	NE	37.79	NA	NA	NA	405.31		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	

Table 1a
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-08											
2Q11	434.11	4/25/2011	NE	29.15	NA	NA	NA	404.96	400.51 - 390.51 (33.60 - 43.60)	NA	*
3Q11		7/5/2011	NE	26.55	NA	NA	NA	407.56		NA	*
4Q11		10/5/2011	NE	26.57	NA	NA	NA	407.54		NA	*
1Q12		1/3/2012	NE	28.84	NA	NA	NA	405.27		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	
MW-09											
2Q11	445.20	4/25/2011	NM	NM	NA	NA	NA	NA	398.75 - 388.75 (46.45 - 56.45)	NM	
3Q11		7/5/2011	NE	38.06	NA	NA	NA	407.14		NA	*
4Q11		10/5/2011	NE	37.56	NA	NA	NA	407.64		NA	*
1Q12		1/3/2012	NE	39.50	NA	NA	NA	405.70		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	*
MW-10											
2Q11	445.03	4/25/2011	NE	40.26	NA	NA	NA	404.77	400.60 - 390.60 (44.43 - 54.43)	NA	*
3Q11		7/5/2011	NE	38.01	NA	NA	NA	407.02		NA	*
4Q11		10/5/2011	NE	37.47	NA	NA	NA	407.56		NA	*
1Q12		1/3/2012	NE	39.39	NA	NA	NA	405.64		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	*
MW-11											
2Q11	442.33	4/25/2011	NE	38.00	NA	NA	NA	404.33	400.67 - 390.67 (41.66 - 51.66)	NA	*
3Q11		7/5/2011	NE	35.46	NA	NA	NA	406.87		NA	*
4Q11		10/5/2011	NE	34.07	NA	NA	NA	408.26		NA	*
1Q12		1/3/2012	NE	37.21	NA	NA	NA	405.12		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	
MW-12											
2Q11	442.60	4/25/2011	NE	38.20	NA	NA	NA	404.40	400.68 - 390.68 (41.92 - 51.92)	NA	*
3Q11		7/5/2011	NE	35.55	NA	NA	NA	407.05		NA	*
4Q11		10/5/2011	NE	35.20	NA	NA	NA	407.40		NA	*
1Q12		1/3/2012	NE	37.57	NA	NA	NA	405.03		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	

Table 1a
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-13											
2Q11	430.27	4/25/2011	NE	24.47	NA	NA	NA	405.80	404.70 - 394.70 (25.57 - 35.57)	NA	*
3Q11		7/5/2011	NE	21.67	NA	NA	NA	408.60		NA	*
4Q11		10/6/2011	NE	21.20	NA	NA	NA	409.07		NA	*
1Q12		1/3/2012	NE	24.35	NA	NA	NA	405.92		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	
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	
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	
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	
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	
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	
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	
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	
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	
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	

Table 1a
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-01											
2Q11	442.56	4/1/2011	NE	27.30	NA	NA	NA	415.26	380.61 - 375.61 (61.95 - 66.95)	NA	*
3Q11		7/5/2011	NE	25.51	NA	NA	NA	417.05		NA	*
4Q11		10/6/2011	NE	28.15	NA	NA	NA	414.41		NA	*
1Q12		1/3/2012	NE	28.93	NA	NA	NA	413.63		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	*
P-4U											
2Q11	442.50	4/1/2011	NE	29.10	NA	NA	NA	413.40	361.35 - 359.35 (81.15 - 83.15)	NA	*
3Q11		7/5/2011	NE	27.02	NA	NA	NA	415.48		NA	*
4Q11		10/6/2011	NE	29.17	NA	NA	NA	413.33		NA	*
1Q12		1/3/2012	NE	40.32	NA	NA	NA	402.18		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	*
P-5L											
2Q11	443.79	4/1/2011	NE	28.10	NA	NA	NA	415.69	303.39 - 301.39 (140.40 - 142.40)	NA	*
3Q11		7/5/2011	NE	25.87	NA	NA	NA	417.92		NA	*
4Q11		10/6/2011	NE	29.16	NA	NA	NA	414.63		NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.37		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	*
P-5U											
2Q11	444.15	4/1/2011	NE	29.91	NA	NA	NA	414.24	313.52 - 311.52 (130.63 - 132.63)	NA	*
3Q11		7/5/2011	NE	27.80	NA	NA	NA	416.35		NA	*
4Q11		10/6/2011	NE	30.41	NA	NA	NA	413.74		NA	*
1Q12		1/3/2012	NE	30.42	NA	NA	NA	413.73		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	*
P-6L											
4Q11	443.20	10/6/2011	NE	28.92	NA	NA	NA	414.28	353.20 - 351.20 (90.00 - 92.00)	NA	*
1Q12		1/3/2012	NE	30.21	NA	NA	NA	412.99		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	*

Table 1a
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-6U											
2Q11	443.35	4/1/2011	NE	29.57	NA	NA	NA	413.78	362.85 - 360.85 (80.50 - 82.50)	NA	*
3Q11		7/5/2011	NE	27.35	NA	NA	NA	416.00		NA	*
4Q11		10/6/2011	NE	29.78	NA	NA	NA	413.57		NA	*
1Q12		1/3/2012	NE	30.97	NA	NA	NA	412.38		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	*
P-7L											
4Q11	443.42	10/6/2011	NE	29.57	NA	NA	NA	413.85	373.42 - 371.42 (70.00 - 72.00)	NA	*
1Q12		1/3/2012	NE	30.91	NA	NA	NA	412.51		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	*
P-7U											
2Q11	443.80	4/1/2011	NE	29.66	NA	NA	NA	414.14	382.72 - 380.72 (61.08 - 63.08)	NA	*
3Q11		7/5/2011	NE	27.30	NA	NA	NA	416.50		NA	*
4Q11		10/6/2011	NE	30.02	NA	NA	NA	413.78		NA	*
1Q12		1/3/2012	NE	31.23	NA	NA	NA	412.57		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	*
P-8L											
4Q11	443.10	10/6/2011	NE	31.01	NA	NA	NA	412.09	373.10 - 371.10 (70.00 - 72.00)	NA	*
1Q12		1/3/2012	NE	30.92	NA	NA	NA	412.18		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	*
P-8U											
2Q11	441.87	4/1/2011	NE	30.50	NA	NA	NA	411.37	382.35 - 380.35 (59.52 - 61.52)	NA	*
3Q11		7/5/2011	NE	28.20	NA	NA	NA	413.67		NA	*
4Q11		10/6/2011	NE	29.86	NA	NA	NA	412.01		NA	*
1Q12		1/3/2012	NE	30.99	NA	NA	NA	410.88		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	*
P-9L											
4Q11	444.41	10/6/2011	NE	33.58	NA	NA	NA	410.83	334.41 - 332.41 (110.00 - 112.00)	NA	*
1Q12		1/3/2012	NE	34.82	NA	NA	NA	409.59		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	*

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
P-9U											
2Q11	444.91	4/1/2011	NE	35.71	NA	NA	NA	409.20	344.32 - 342.32 (100.59 - 102.59)	NA	*
3Q11		7/5/2011	NE	34.92	NA	NA	NA	409.99		NA	*
4Q11		10/6/2011	NE	34.56	NA	NA	NA	410.35		NA	*
1Q12		1/3/2012	NE	34.52	NA	NA	NA	410.39		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	*
P-11L											
2Q11	442.80	4/1/2011	NE	31.28	NA	NA	NA	411.52	332.59 - 330.59 (110.21 - 112.21)	NA	*
3Q11		7/5/2011	NE	29.34	NA	NA	NA	413.46		NA	*
4Q11		10/6/2011	NE	30.67	NA	NA	NA	412.13		NA	*
1Q12		1/3/2012	NE	31.77	NA	NA	NA	411.03		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	*
P-11U											
2Q11	443.09	4/1/2011	NE	31.92	NA	NA	NA	411.17	343.17 - 341.17 (99.92 - 101.92)	NA	*
3Q11		7/5/2011	NE	29.95	NA	NA	NA	413.14		NA	*
4Q11		10/6/2011	NE	31.12	NA	NA	NA	411.97		NA	*
1Q12		1/3/2012	NE	32.35	NA	NA	NA	410.74		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	*
P-14											
2Q11	442.65	4/1/2011	NE	27.38	NA	NA	NA	415.27	395.32 - 385.32 (47.33 - 57.33)	NA	*
3Q11		7/5/2011	NE	25.57	NA	NA	NA	417.08		NA	*
4Q11		10/6/2011	NE	28.20	NA	NA	NA	414.45		NA	*
1Q12		1/3/2012	NE	28.98	NA	NA	NA	413.67		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	*
P-15											
2Q11	443.35	4/1/2011	NE	29.80	NA	NA	NA	413.55	397.90 - 387.90 (45.45 - 55.45)	NA	*
3Q11		7/5/2011	NE	27.75	NA	NA	NA	415.60		NA	*
4Q11		10/6/2011	NE	29.93	NA	NA	NA	413.42		NA	*
1Q12		1/3/2012	31.05	31.06	412.29	412.30	0.01	412.30		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	*

Table 1a
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-16											
2Q11	442.31	4/1/2011	NE	28.54	NA	NA	NA	413.77	396.57 - 386.57 (45.74 - 55.74)	NA	*
3Q11		7/5/2011	NE	26.34	NA	NA	NA	415.97		NA	*
4Q11		10/6/2011	NE	28.77	NA	NA	NA	413.54		NA	*
1Q12		1/3/2012	NE	30.00	NA	NA	NA	412.31		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	*
P-43											
2Q11	444.07	4/1/2011	NE	32.75	NA	NA	NA	411.32	380.51 - 370.51 (63.56 - 73.56)	NA	*
3Q11		7/5/2011	NE	30.78	NA	NA	NA	413.29		NA	*
4Q11		10/6/2011	NE	32.18	NA	NA	NA	411.89		NA	*
1Q12		1/3/2012	NE	33.24	NA	NA	NA	410.83		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	*
P-53											
2Q11	446.23	4/1/2011	NE	39.99	NA	NA	NA	406.24	407.73 - 382.73 (38.50 - 63.50)	NA	
3Q11		7/5/2011	NE	38.28	NA	NA	NA	407.95		NA	*
4Q11		10/5/2011	NE	37.58	NA	NA	NA	408.65		NA	*
1Q12		1/3/2012	NE	38.73	NA	NA	NA	407.50		0.0	
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		NM	
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		0.0	
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	
P-54											
2Q11	442.18	4/25/2011	NE	38.00	NA	NA	NA	404.18	404.18 - 379.18 (38.00 - 63.00)	NA	
3Q11		7/5/2011	NE	35.38	NA	NA	NA	406.80		NA	*
4Q11		10/5/2011	NE	35.01	NA	NA	NA	407.17		NA	*
1Q12		1/3/2012	NE	37.17	NA	NA	NA	405.01		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	
P-55											
2Q11	445.95	4/25/2011	41.52	41.54	404.41	404.43	0.02	404.43	406.13 - 381.13 (39.82 - 64.82)	NA	
3Q11		7/5/2011	39.41	39.42	406.53	406.54	0.01	406.54		NA	*
4Q11		10/6/2011	NE	38.61	NA	NA	NA	407.34		NA	*
1Q12		1/4/2012	NE	40.71	NA	NA	NA	405.24		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	

Table 1a
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-56											
2Q11	446.02	4/25/2011	NE	42.16	NA	NA	NA	403.86	405.20 - 380.20 (40.82 - 65.82)	NA	
3Q11		7/5/2011	NE	39.63	NA	NA	NA	406.39		NA	*
4Q11		10/6/2011	NE	39.10	NA	NA	NA	406.92		NA	*
1Q12		1/4/2012	NE	41.51	NA	NA	NA	404.51		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	
P-57											
2Q11	446.53	4/25/2011	NE	41.88	NA	NA	NA	404.65	406.07 - 381.07 (40.46 - 65.46)	NA	
3Q11		7/5/2011	NE	39.48	NA	NA	NA	407.05		NA	*
4Q11		10/6/2011	NE	39.20	NA	NA	NA	407.33		NA	*
1Q12		2/13/2012	NE	42.13	NA	NA	NA	404.40		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	
P-58											
2Q11	444.92	4/25/2011	NE	39.78	NA	NA	NA	405.14	404.70 - 379.70 (40.21 - 65.21)	NA	*
3Q11		7/5/2011	NE	37.42	NA	NA	NA	407.50		NA	*
4Q11		10/6/2011	NE	37.31	NA	NA	NA	407.61		NA	*
1Q12		1/4/2012	NE	39.41	NA	NA	NA	405.51		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	
P-59											
2Q11	446.78	4/25/2011	43.25	43.26	403.52	403.53	0.01	403.53	398.87 - 373.87 (47.91 - 72.91)	NA	*
3Q11		7/5/2011	NE	41.44	NA	NA	NA	405.34		NA	*
4Q11		10/6/2011	NE	40.77	NA	NA	NA	406.01		NA	*
1Q12		1/4/2012	NE	42.61	NA	NA	NA	404.17		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	*
P-60											
2Q11	446.57	4/25/2011	42.72	43.18	403.39	403.85	0.46	403.76	403.12 - 383.12 (43.45 - 63.45)	NA	*
3Q11		7/5/2011	40.41	40.77	405.80	406.16	0.36	406.09		NA	*
4Q11		10/6/2011	39.72	40.06	406.51	406.85	0.34	406.79		NA	*
1Q12		1/4/2012	NE	41.98	NA	NA	NA	404.59		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	

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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
P-60-11											
2Q11	446.18	4/25/2011	NE	42.22	NA	NA	NA	403.96	413.03 - 383.03 (33.15 - 63.15)	NA	
3Q11		7/5/2011	NE	39.97	NA	NA	NA	406.21		NA	
4Q11		10/6/2011	NE	39.25	NA	NA	NA	406.93		NA	
1Q12		1/4/2012	NE	41.22	NA	NA	NA	404.96		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	
P-60-12											
2Q11	443.31	4/25/2011	NE	39.63	NA	NA	NA	403.68	383.31 - 373.31 (60.00 - 70.00)	NA	*
3Q11		7/5/2011	NE	37.27	NA	NA	NA	406.04		NA	*
4Q11		10/6/2011	NE	36.53	NA	NA	NA	406.78		NA	*
1Q12		1/4/2012	NE	38.76	NA	NA	NA	404.55		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	*
P-60-12S											
2Q11	443.33	4/25/2011	NE	21.84	NA	NA	NA	421.49	429.49 - 419.49 (13.84 - 23.84)	NA	
3Q11		7/5/2011	21.10	21.11	422.22	422.23	0.01	422.23		NA	
4Q11		10/6/2011	NE	23.36	NA	NA	NA	419.97		NA	
1Q12		1/4/2012	NE	22.81	NA	NA	NA	420.52		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	
P-60-13											
2Q11	442.43	4/25/2011	38.80	39.10	403.33	403.63	0.30	403.57	402.43 - 382.43 (40.00 - 60.00)	NA	*
3Q11		7/5/2011	36.85	36.99	405.44	405.58	0.14	405.55		NA	*
4Q11		10/6/2011	NE	35.86	NA	NA	NA	406.57		NA	*
1Q12		1/4/2012	NE	37.82	NA	NA	NA	404.61		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	Inaccessible due to snow
P-60-13S											
2Q11	442.39	4/25/2011	NE	17.45	NA	NA	NA	424.94	432.39 - 422.39 (10.00 - 20.00)	NA	
3Q11		7/5/2011	NE	17.08	NA	NA	NA	425.31		NA	
4Q11		10/6/2011	NE	18.44	NA	NA	NA	423.95		NA	
1Q12		1/4/2012	NE	17.66	NA	NA	NA	424.73		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	Inaccessible due to snow

Table 1a
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-S											
3Q11	446.98	7/5/2011	NE	40.81	NA	NA	NA	406.17	410.50 - 395.50 (36.48 - 51.48)	NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/4/2012	41.39	41.90	405.08	405.59	0.51	405.49		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	
P-61											
2Q11	444.27	4/25/2011	NE	40.93	NA	NA	NA	403.34	398.59 - 373.59 (45.68 - 70.68)	NA	*
3Q11		7/5/2011	37.58	37.59	406.68	406.69	0.01	406.69		NA	*
4Q11		10/6/2011	NE	37.63	NA	NA	NA	406.64		NA	*
1Q12		1/3/2012	NE	40.34	NA	NA	NA	403.93		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	*
P-62											
2Q11	442.32	4/25/2011	NE	38.18	NA	NA	NA	404.14	400.85 - 375.85 (41.47 - 66.47)	NA	*
3Q11		7/5/2011	35.62	35.63	406.69	406.70	0.01	406.70		NA	*
4Q11		10/6/2011	NE	35.64	NA	NA	NA	406.68		NA	*
1Q12		1/3/2012	37.68	37.71	404.61	404.64	0.03	404.64		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	
P-63											
2Q11	445.75	4/1/2011	NE	41.11	NA	NA	NA	404.64	398.46 - 373.46 (47.29 - 72.29)	NA	*
3Q11		7/5/2011	NE	38.56	NA	NA	NA	407.19		NA	*
4Q11		10/6/2011	NE	39.20	NA	NA	NA	406.55		NA	*
1Q12		1/3/2012	NE	40.65	NA	NA	NA	405.10		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	400.84		22.9	*
P-64											
2Q11	446.52	4/1/2011	41.77	41.86	404.66	404.75	0.09	404.73	399.29 - 374.29 (47.23 - 72.23)	NA	*
3Q11		7/5/2011	39.25	39.42	407.10	407.27	0.17	407.24		NA	*
4Q11		10/6/2011	40.35	40.53	405.99	406.17	0.18	406.13		NA	*
1Q12		1/3/2012	41.68	41.75	404.77	404.84	0.07	404.83		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	

Table 1a
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-65											
2Q11	444.53	4/1/2011	NE	39.20	NA	NA	NA	405.33	396.91 - 371.91 (47.62 - 72.62)	NA	*
3Q11		7/5/2011	NE	36.87	NA	NA	NA	407.66		NA	*
4Q11		10/6/2011	NE	37.67	NA	NA	NA	406.86		NA	*
1Q12		1/3/2012	NE	39.15	NA	NA	NA	405.38		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	396.91 - 371.91 (47.69 - 72.69)	21.2	*Well repaired during 3Q13
1Q14		2/12/2014	NE	44.91	NA	NA	NA	399.54		2.3	* Well resurveyed during 1Q14
P-66											
2Q11	436.70	4/25/2011	NE	31.26	NA	NA	NA	405.44	401.98 - 376.98 (34.72 - 59.72)	NA	*
3Q11		7/5/2011	NE	28.87	NA	NA	NA	407.83		NA	*
4Q11		10/5/2011	NE	28.92	NA	NA	NA	407.78		NA	*
1Q12		1/1/2012	NM	NM	NA	NA	NA	NA		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	
P-67											
2Q11	444.13	4/1/2011	NE	37.24	NA	NA	NA	406.89	402.16 - 377.16 (41.98 - 66.98)	NA	*
3Q11		7/5/2011	NE	35.17	NA	NA	NA	408.96		NA	*
4Q11		10/5/2011	NE	35.38	NA	NA	NA	408.75		NA	*
1Q12		1/4/2012	NE	37.08	NA	NA	NA	407.05		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	
P-68											
2Q11	445.07	4/25/2011	41.42	41.51	403.56	403.65	0.09	403.63	399.81 - 374.81 (45.26 - 70.26)	NA	*
3Q11		7/5/2011	39.06	39.13	405.94	406.01	0.07	406.00		NA	*
4Q11		10/6/2011	38.53	38.58	406.49	406.54	0.05	406.53		NA	*
1Q12		1/4/2012	40.53	40.61	404.46	404.54	0.08	404.52		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	*
P-69											
2Q11	443.18	4/25/2011	NE	39.98	NA	NA	NA	403.20	402.36 - 377.36 (40.82 - 65.82)	NA	*
3Q11		7/5/2011	NE	37.41	NA	NA	NA	405.77		NA	*
4Q11		10/6/2011	NE	36.77	NA	NA	NA	406.41		NA	*
1Q12		1/4/2012	NE	39.18	NA	NA	NA	404.00		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	

Table 1a
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-70											
2Q11	442.83	4/25/2011	39.20	39.22	403.61	403.63	0.02	403.62	398.16 - 373.16 (44.67 - 69.67)	NA	*
3Q11		7/5/2011	36.42	36.43	406.40	406.41	0.01	406.41		NA	*
4Q11		10/6/2011	NE	36.25	NA	NA	NA	406.58		NA	*
1Q12		1/3/2012	NE	38.62	NA	NA	NA	404.21		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	*
P-71											
2Q11	444.83	4/25/2011	NE	39.52	NA	NA	NA	405.31	402.22 - 377.22 (42.61 - 67.61)	NA	*
3Q11		7/5/2011	NE	37.91	NA	NA	NA	406.92		NA	*
4Q11		10/6/2011	NE	47.31	NA	NA	NA	397.52		NA	
1Q12		1/3/2012	NE	38.91	NA	NA	NA	405.92		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	
P-72											
2Q11	444.43	4/25/2011	38.78	38.80	405.63	405.65	0.02	405.65	398.66 - 373.66 (45.77 - 70.77)	NA	*
3Q11		7/5/2011	37.02	37.03	407.40	407.41	0.01	407.41		NA	*
4Q11		10/6/2011	NE	36.82	NA	NA	NA	407.61		NA	*
1Q12		1/3/2012	NE	38.43	NA	NA	NA	406.00		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	*
P-73											
2Q11	443.76	4/25/2011	NE	39.13	NA	NA	NA	404.63	402.17 - 377.17 (41.60 - 66.60)	NA	*
3Q11		7/5/2011	NE	36.88	NA	NA	NA	406.88		NA	*
4Q11		10/6/2011	NE	36.68	NA	NA	NA	407.08		NA	*
1Q12		1/4/2012	NE	38.68	NA	NA	NA	405.08		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	
P-74											
2Q11	442.63	4/25/2011	NE	39.18	NA	NA	NA	403.45	398.20 - 373.20 (44.43 - 69.43)	NA	*
3Q11		7/5/2011	NE	36.51	NA	NA	NA	406.12		NA	*
4Q11		10/6/2011	NE	36.26	NA	NA	NA	406.37		NA	*
1Q12		1/4/2012	NE	38.56	NA	NA	NA	404.07		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		2/13/2014	NE	43.28	NA	NA	NA	399.35		1.0	*

Table 1a
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-75											
2Q11	446.32	4/25/2011	40.81	40.83	405.49	405.51	0.02	405.51	403.19 - 378.19 (43.13 - 68.13)	NA	*
3Q11		7/5/2011	38.57	38.59	407.73	407.75	0.02	407.75		NA	*
4Q11		10/5/2011	38.52	38.53	407.79	407.80	0.01	407.80		NA	*
1Q12		1/4/2012	NE	40.48	NA	NA	NA	405.84		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	
P-82A											
2Q11	434.69	4/1/2011	NE	25.12	NA	NA	NA	409.57	401.48 - 386.48 (33.21 - 48.21)	NA	*
3Q11		7/5/2011	NE	23.01	NA	NA	NA	411.68		NA	*
4Q11		10/5/2011	NE	24.00	NA	NA	NA	410.69		NA	*
1Q12		1/3/2012	NE	25.50	NA	NA	NA	409.19		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	*
P-82B											
2Q11	434.44	4/1/2011	NE	24.85	NA	NA	NA	409.59	370.84 - 368.84 (63.60 - 65.60)	NA	*
3Q11		7/5/2011	NE	22.71	NA	NA	NA	411.73		NA	*
4Q11		10/5/2011	NE	23.73	NA	NA	NA	410.71		NA	*
1Q12		1/3/2012	NE	25.21	NA	NA	NA	409.23		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	*
P-82C											
2Q11	434.16	4/1/2011	NE	24.87	NA	NA	NA	409.29	351.39 - 349.39 (82.77 - 84.77)	NA	*
3Q11		7/5/2011	NE	22.75	NA	NA	NA	411.41		NA	*
4Q11		10/5/2011	NE	23.81	NA	NA	NA	410.35		NA	*
1Q12		1/3/2012	NE	25.26	NA	NA	NA	408.90		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	*
P-82D											
2Q11	434.85	4/1/2011	NE	25.63	NA	NA	NA	409.22	323.43 - 321.43 (111.42 - 113.42)	NA	*
3Q11		7/5/2011	NE	23.54	NA	NA	NA	411.31		NA	*
4Q11		10/5/2011	NE	24.56	NA	NA	NA	410.29		NA	*
1Q12		1/3/2012	NE	26.06	NA	NA	NA	408.79		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	*

Table 1a
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-83A											
2Q11	445.23	4/1/2011	NE	38.42	NA	NA	NA	406.81	398.58 - 383.58 (46.65 - 61.65)	NA	*
3Q11		7/5/2011	NE	36.25	NA	NA	NA	408.98		NA	*
4Q11		10/6/2011	NE	37.41	NA	NA	NA	407.82		NA	*
1Q12		1/3/2012	NE	38.31	NA	NA	NA	406.92		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	*
P-83B											
2Q11	445.47	4/1/2011	NE	38.69	NA	NA	NA	406.78	375.82 - 373.82 (69.65 - 71.65)	NA	*
3Q11		7/5/2011	NE	36.57	NA	NA	NA	408.90		NA	*
4Q11		10/6/2011	NE	37.68	NA	NA	NA	407.79		NA	*
1Q12		1/3/2012	NE	38.58	NA	NA	NA	406.89		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	*
P-83C											
2Q11	445.64	4/1/2011	NE	38.85	NA	NA	NA	406.79	353.25 - 351.25 (92.39 - 94.39)	NA	*
3Q11		7/5/2011	NE	37.02	NA	NA	NA	408.62		NA	*
4Q11		10/6/2011	NE	38.15	NA	NA	NA	407.49		NA	*
1Q12		1/3/2012	NE	39.05	NA	NA	NA	406.59		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	*
P-83D											
2Q11	445.55	4/1/2011	NE	38.31	NA	NA	NA	407.24	311.84 - 309.84 (133.71 - 135.71)	NA	*
3Q11		7/5/2011	NE	36.98	NA	NA	NA	408.57		NA	*
4Q11		10/6/2011	NE	38.07	NA	NA	NA	407.48		NA	*
1Q12		1/3/2012	NE	39.01	NA	NA	NA	406.54		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	*
P-84A											
2Q11	446.39	4/25/2011	NE	40.11	NA	NA	NA	406.28	397.89 - 382.89 (48.50 - 63.50)	NA	*
3Q11		7/5/2011	NE	38.58	NA	NA	NA	407.81		NA	*
4Q11		10/6/2011	NE	34.36	NA	NA	NA	412.03		NA	*
1Q12		1/5/2012	NE	39.49	NA	NA	NA	406.90		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	*

Table 1a
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											
2Q11	446.10	4/25/2011	NE	39.85	NA	NA	NA	406.25	372.60 - 370.60 (73.50 - 75.50)	NA	*
3Q11		7/5/2011	NE	38.32	NA	NA	NA	407.78		NA	*
4Q11		10/6/2011	NE	38.09	NA	NA	NA	408.01		NA	*
1Q12		1/5/2012	NE	39.23	NA	NA	NA	406.87		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	*
P-84C											
2Q11	446.13	4/25/2011	NE	39.86	NA	NA	NA	406.27	352.08 - 350.08 (94.05 - 96.05)	NA	*
3Q11		7/5/2011	NE	38.64	NA	NA	NA	407.49		NA	*
4Q11		10/6/2011	NE	38.41	NA	NA	NA	407.72		NA	*
1Q12		1/5/2012	NE	39.53	NA	NA	NA	406.60		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	*
P-84D											
2Q11	446.14	4/25/2011	NE	39.87	NA	NA	NA	406.27	324.99 - 322.99 (121.15 - 123.15)	NA	*
3Q11		7/5/2011	NE	38.68	NA	NA	NA	407.46		NA	*
4Q11		10/6/2011	NE	38.43	NA	NA	NA	407.71		NA	*
1Q12		1/5/2012	NE	39.55	NA	NA	NA	406.59		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	*
P-88A											
2Q11	443.12	4/1/2011	NE	31.36	NA	NA	NA	411.76	404.72 - 389.72 (38.40 - 53.40)	NA	*
3Q11		7/5/2011	NE	29.78	NA	NA	NA	413.34		NA	*
4Q11		10/5/2011	NE	29.92	NA	NA	NA	413.20		NA	*
1Q12		1/4/2012	NE	31.18	NA	NA	NA	411.94		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	*
P-88B											
2Q11	443.17	4/1/2011	NE	31.42	NA	NA	NA	411.75	371.17 - 369.17 (72.00 - 74.00)	NA	*
3Q11		7/5/2011	NE	29.71	NA	NA	NA	413.46		NA	*
4Q11		10/5/2011	NE	29.86	NA	NA	NA	413.31		NA	*
1Q12		1/4/2012	NE	31.16	NA	NA	NA	412.01		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	*

Table 1a
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-88C											
2Q11	443.16	4/1/2011	NE	31.38	NA	NA	NA	411.78	350.86 - 348.86 (92.30 - 94.30)	NA	*
3Q11		7/5/2011	NE	30.02	NA	NA	NA	413.14		NA	*
4Q11		10/5/2011	NE	30.14	NA	NA	NA	413.02		NA	*
1Q12		1/4/2012	NE	31.44	NA	NA	NA	411.72		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	*
P-88D											
2Q11	443.23	4/1/2011	NE	31.81	NA	NA	NA	411.42	329.53 - 327.53 (113.70 - 115.70)	NA	*
3Q11		7/5/2011	NE	30.08	NA	NA	NA	413.15		NA	*
4Q11		10/5/2011	NE	30.25	NA	NA	NA	412.98		NA	*
1Q12		1/4/2012	NE	31.57	NA	NA	NA	411.66		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	*
P-89B											
2Q11	447.35	4/1/2011	NE	37.80	NA	NA	NA	409.55	369.99 - 367.99 (77.36 - 79.36)	NA	*
3Q11		7/5/2011	NE	35.99	NA	NA	NA	411.36		NA	*
4Q11		10/6/2011	NE	37.05	NA	NA	NA	410.30		NA	*
1Q12		1/3/2012	NE	38.10	NA	NA	NA	409.25		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	*
P-89C											
2Q11	447.68	4/1/2011	NE	38.14	NA	NA	NA	409.54	350.05 - 348.05 (97.63 - 99.63)	NA	*
3Q11		7/5/2011	NE	36.33	NA	NA	NA	411.35		NA	*
4Q11		10/6/2011	NE	37.39	NA	NA	NA	410.29		NA	*
1Q12		1/3/2012	NE	38.42	NA	NA	NA	409.26		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	*
P-89D											
2Q11	447.54	4/1/2011	NE	38.12	NA	NA	NA	409.42	307.20 - 305.20 (140.34 - 142.34)	NA	*
3Q11		7/5/2011	NE	36.23	NA	NA	NA	411.31		NA	*
4Q11		10/6/2011	NE	37.35	NA	NA	NA	410.19		NA	*
1Q12		1/3/2012	NE	38.47	NA	NA	NA	409.07		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	*

Table 1a
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-91A											
2Q11	447.19	4/1/2011	NE	43.10	NA	NA	NA	404.09	395.68 - 380.68 (51.52 - 66.52)	NA	*
3Q11		7/5/2011	NE	40.42	NA	NA	NA	406.77		NA	*
4Q11		10/6/2011	NE	41.63	NA	NA	NA	405.56		NA	*
1Q12		1/3/2012	NE	42.91	NA	NA	NA	404.28		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	*
P-91B											
2Q11	447.26	4/1/2011	NE	43.28	NA	NA	NA	403.98	372.57 - 370.57 (74.69 - 76.69)	NA	*
3Q11		7/5/2011	NE	40.62	NA	NA	NA	406.64		NA	*
4Q11		10/6/2011	NE	41.53	NA	NA	NA	405.73		NA	*
1Q12		1/3/2012	NE	43.00	NA	NA	NA	404.26		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	*
P-91C											
2Q11	447.02	4/1/2011	NE	43.00	NA	NA	NA	404.02	352.29 - 350.29 (94.73 - 96.73)	NA	*
3Q11		7/5/2011	NE	40.35	NA	NA	NA	406.67		NA	*
4Q11		10/6/2011	NE	41.47	NA	NA	NA	405.55		NA	*
1Q12		1/3/2012	NE	42.74	NA	NA	NA	404.28		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	*
P-91D											
2Q11	447.02	4/1/2011	NE	42.97	NA	NA	NA	404.05	278.70 - 276.70 (168.32 - 170.32)	NA	*
3Q11		7/5/2011	NE	40.27	NA	NA	NA	406.75		NA	*
4Q11		10/6/2011	NE	41.44	NA	NA	NA	405.58		NA	*
1Q12		1/3/2012	NE	42.73	NA	NA	NA	404.29		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	*
P-92A											
2Q11	446.12	4/1/2011	NE	41.02	NA	NA	NA	405.10	398.55 - 383.55 (47.57 - 62.57)	NA	*
3Q11		7/5/2011	38.55	38.59	407.53	407.57	0.04	407.56		NA	*
4Q11		10/6/2011	39.70	39.76	406.36	406.42	0.06	406.41		NA	*
1Q12		1/4/2012	41.05	41.07	405.05	405.07	0.02	405.07		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	*

Table 1a
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-92B											
2Q11	446.07	4/1/2011	NE	40.92	NA	NA	NA	405.15	372.42 - 370.42 (73.65 - 75.65)	NA	*
3Q11		7/5/2011	NE	38.51	NA	NA	NA	407.56		NA	*
4Q11		10/6/2011	NE	39.68	NA	NA	NA	406.39		NA	*
1Q12		1/4/2012	NE	41.02	NA	NA	NA	405.05		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	*
P-92C											
2Q11	445.98	4/1/2011	NE	40.77	NA	NA	NA	405.21	352.54 - 350.54 (93.44 - 95.44)	NA	*
3Q11		7/5/2011	NE	38.33	NA	NA	NA	407.65		NA	*
4Q11		10/6/2011	NE	39.63	NA	NA	NA	406.35		NA	*
1Q12		1/4/2012	NE	39.95	NA	NA	NA	406.03		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	*
P-92D											
2Q11	445.90	4/1/2011	NE	40.73	NA	NA	NA	405.17	304.90 - 302.90 (141.00 - 143.00)	NA	*
3Q11		7/5/2011	NE	38.33	NA	NA	NA	407.57		NA	*
4Q11		10/6/2011	NE	39.57	NA	NA	NA	406.33		NA	*
1Q12		1/4/2012	NE	39.89	NA	NA	NA	406.01		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	*
P-93A											
2Q11	446.58	4/25/2011	NE	41.80	NA	NA	NA	404.78	398.41 - 383.41 (48.17 - 63.17)	NA	*
3Q11		7/5/2011	NE	39.40	NA	NA	NA	407.18		NA	*
4Q11		10/6/2011	NE	39.16	NA	NA	NA	407.42		NA	*
1Q12		1/4/2012	NE	41.32	NA	NA	NA	405.26		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	*
P-93B											
2Q11	446.46	4/25/2011	NE	41.69	NA	NA	NA	404.77	371.86 - 369.86 (74.60 - 76.60)	NA	*
3Q11		7/5/2011	NE	39.44	NA	NA	NA	407.02		NA	*
4Q11		10/6/2011	NE	39.19	NA	NA	NA	407.27		NA	*
1Q12		1/4/2012	NE	41.38	NA	NA	NA	405.08		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	*

Table 1a
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-93C											
2Q11	446.51	4/25/2011	NE	41.70	NA	NA	NA	404.81	352.26 - 350.26 (94.26 - 96.26)	NA	*
3Q11		7/5/2011	NE	39.32	NA	NA	NA	407.19		NA	*
4Q11		10/6/2011	NE	39.15	NA	NA	NA	407.36		NA	*
1Q12		1/4/2012	NE	41.27	NA	NA	NA	405.24		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	*
P-93D											
2Q11	446.89	4/25/2011	NE	41.84	NA	NA	NA	405.05	321.14 - 319.14 (125.75 - 127.75)	NA	*
3Q11		7/5/2011	NE	39.46	NA	NA	NA	407.43		NA	*
4Q11		10/6/2011	NE	39.22	NA	NA	NA	407.67		NA	*
1Q12		1/4/2012	NE	41.41	NA	NA	NA	405.48		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	*
P-94											
2Q11	444.65	4/1/2011	NE	34.27	NA	NA	NA	410.38	398.80 - 383.80 (45.85 - 60.85)	NA	*
3Q11		7/5/2011	NE	32.14	NA	NA	NA	412.51		NA	*
4Q11		10/6/2011	NE	33.53	NA	NA	NA	411.12		NA	*
1Q12		1/3/2012	NE	34.75	NA	NA	NA	409.90		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	*
P-95											
2Q11	443.44	4/1/2011	NE	29.75	NA	NA	NA	413.69	406.92 - 391.92 (36.52 - 51.52)	NA	*
3Q11		7/5/2011	NE	28.12	NA	NA	NA	415.32		NA	*
4Q11		10/5/2011	NE	28.24	NA	NA	NA	415.20		NA	*
1Q12		1/5/2012	NE	29.50	NA	NA	NA	413.94		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	*
P-102											
2Q11	444.91	4/1/2011	NE	32.41	NA	NA	NA	412.50	402.16 - 382.16 (42.75 - 62.75)	NA	*
3Q11		7/5/2011	NE	30.91	NA	NA	NA	414.00		NA	*
4Q11		10/6/2011	NE	31.47	NA	NA	NA	413.44		NA	*
1Q12		1/4/2012	NE	32.45	NA	NA	NA	412.46		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	*

Table 1a
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-114											
2Q11	432.41	4/25/2011	NE	26.61	NA	NA	NA	405.80	399.73 - 379.73 (32.67 - 52.67)	NA	*
3Q11		7/5/2011	NE	23.48	NA	NA	NA	408.93		NA	*
4Q11		10/5/2011	NE	24.59	NA	NA	NA	407.82		NA	*
1Q12		1/3/2012	NE	26.88	NA	NA	NA	405.53		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	*
P-115											
2Q11	433.31	4/25/2011	NE	27.38	NA	NA	NA	405.93	401.01 - 381.01 (32.30 - 52.30)	NA	*
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	25.67	NA	NA	NA	407.64		NA	*
1Q12		1/3/2012	NE	27.86	NA	NA	NA	405.45		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	
P-116											
2Q11	436.45	4/25/2011	NE	30.76	NA	NA	NA	405.69	399.01 - 379.01 (37.44 - 57.44)	NA	*
3Q11		7/5/2011	NE	27.41	NA	NA	NA	409.04		NA	*
4Q11		10/5/2011	NE	28.96	NA	NA	NA	407.49		NA	*
1Q12		1/3/2012	NE	31.35	NA	NA	NA	405.10		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	*
P-117											
2Q11	432.67	4/25/2011	NE	26.96	NA	NA	NA	405.71	399.74 - 379.74 (32.93 - 52.93)	NA	*
3Q11		7/5/2011	NE	23.54	NA	NA	NA	409.13		NA	*
4Q11		10/5/2011	NE	25.16	NA	NA	NA	407.51		NA	*
1Q12		1/3/2012	NE	27.56	NA	NA	NA	405.11		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	*
P-118											
2Q11	431.32	4/1/2011	NE	25.75	NA	NA	NA	405.57	400.20 - 384.27 (31.12 - 47.05)	NA	*
3Q11		7/5/2011	NE	22.11	NA	NA	NA	409.21		NA	*
4Q11		10/5/2011	NE	34.28	NA	NA	NA	397.04		NA	
1Q12		1/3/2012	NE	26.78	NA	NA	NA	404.54		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	

Table 1a
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											
2Q11	431.92	4/25/2011	NE	25.77	NA	NA	NA	406.15	401.25 - 385.32 (30.67 - 46.60)	NA	*
3Q11		7/5/2011	NE	23.06	NA	NA	NA	408.86		NA	*
4Q11		10/5/2011	NE	23.70	NA	NA	NA	408.22		NA	*
1Q12		1/3/2012	NE	29.80	NA	NA	NA	402.12		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	
P-120											
2Q11	432.78	4/1/2011	NE	25.82	NA	NA	NA	406.96	401.40 - 385.47 (31.38 - 47.31)	NA	*
3Q11		7/5/2011	NE	22.85	NA	NA	NA	409.93		NA	*
4Q11		10/5/2011	NE	24.15	NA	NA	NA	408.63		NA	*
1Q12		1/3/2012	NE	26.22	NA	NA	NA	406.56		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	
P-129											
2Q11	432.46	4/1/2011	NE	26.85	NA	NA	NA	405.61	400.49 - 384.56 (31.97 - 47.90)	NA	*
3Q11		7/5/2011	NE	22.74	NA	NA	NA	409.72		NA	*
4Q11		10/5/2011	NE	26.57	NA	NA	NA	405.89		NA	*
1Q12		1/5/2012	NE	29.31	NA	NA	NA	403.15		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	
GP-9-PZ											
2Q11	442.41	4/25/2011	NE	38.85	NA	NA	NA	403.56	404.81 - 394.81 (37.60 - 47.60)	NA	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	36.65	NA	NA	NA	405.76		NA	*
1Q12		1/4/2012	NE	38.13	NA	NA	NA	404.28		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	
ROST-3-MW (ROST-3-PZ)											
2Q11	442.29	4/25/2011	NE	38.21	NA	NA	NA	404.08	402.29 - 392.29 (40.00 - 50.00)	NA	*
3Q11		7/5/2011	NE	35.83	NA	NA	NA	406.46		NA	*
4Q11		10/5/2011	NE	35.18	NA	NA	NA	407.11		NA	*
1Q12		1/3/2012	NE	37.33	NA	NA	NA	404.96		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	442.29	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	

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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
ROST-4-PZ											
2Q11	442.13	4/25/2011	NE	37.69	NA	NA	NA	404.44	407.20 - 397.20 (34.93 - 44.93)	NA	3/4" Piezometer replaced within 2" monitoring well
3Q11		7/5/2011	NE	35.85	NA	NA	NA	406.28		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.62	NA	NA	NA	405.51		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	
ROST-4-PZ(A)											
2Q11	442.11	4/25/2011	NE	37.18	NA	NA	NA	404.93	407.34 - 397.34 (34.77 - 44.77)	NA	
3Q11		7/5/2011	NE	35.21	NA	NA	NA	406.90		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	35.92	NA	NA	NA	406.19		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	
ROST-4-PZ(B)											
2Q11	442.38	4/25/2011	NE	37.80	NA	NA	NA	404.58	407.33 - 397.33 (35.05 - 45.05)	NA	
3Q11		7/5/2011	NE	35.93	NA	NA	NA	406.45		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.65	NA	NA	NA	405.73		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	
ROST-4-PZ(C)											
2Q11	442.66	4/25/2011	NE	38.52	NA	NA	NA	404.14	407.71 - 397.71 (34.95 - 44.95)	NA	
3Q11		7/5/2011	NE	36.62	NA	NA	NA	406.04		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	37.40	NA	NA	NA	405.26		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	
ROST-4-PZ(D)											
2Q11	442.98	4/25/2011	NE	38.41	NA	NA	NA	404.57	408.01 - 398.01 (34.97 - 44.97)	NA	
3Q11		7/5/2011	NE	36.58	NA	NA	NA	406.40		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	37.23	37.68	405.30	405.75	0.45	405.66		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	

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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
ROST-4-PZ(E)											
2Q11	441.96	4/25/2011	NE	37.63	NA	NA	NA	404.33	407.21 - 397.21 (34.75 - 44.75)	NA	
3Q11		7/5/2011	NE	35.81	NA	NA	NA	406.15		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	36.48	36.92	405.04	405.48	0.44	405.39		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	
ROST-4-PZ(F)											
2Q11	442.12	4/25/2011	NE	37.87	NA	NA	NA	404.25	407.59 - 397.59 (34.53 - 44.53)	NA	
3Q11		7/5/2011	NE	35.99	NA	NA	NA	406.13		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	36.83	NA	NA	NA	405.29		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	
ROST-4-PZ(G)											
2Q11	442.13	4/25/2011	NE	38.08	NA	NA	NA	404.05	407.85 - 397.85 (34.28 - 44.28)	NA	
3Q11		7/5/2011	NE	35.76	NA	NA	NA	406.37		NA	
4Q11		10/1/2011	NM	NM	NA	NA	NA	NA		NM	
1Q12		1/3/2012	NE	37.44	NA	NA	NA	404.69		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	
ROST-5-PZ											
2Q11	442.22	4/25/2011	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	NA	Well Dry
3Q11		7/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	NE	NA	NA	NA	NA		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
ROST-7-PZ											
2Q11	442.19	4/25/2011	NE	23.72	NA	NA	NA	418.47	422.19 - 412.19 (20.00 - 30.00)	NA	
3Q11		7/5/2011	NE	22.05	NA	NA	NA	420.14		NA	
4Q11		10/5/2011	NE	22.52	NA	NA	NA	419.67		NA	
1Q12		1/3/2012	NE	23.64	NA	NA	NA	418.55		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	

Table 1a
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-10-PZ											
2Q11	444.51	4/25/2011	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	NA	Well Dry
3Q11		7/5/2011	NE	19.67	NA	NA	NA	424.84		NA	
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	NE	NA	NA	NA	NA		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
ROST-21-PZ											
2Q11	443.72	4/25/2011	NE	19.04	NA	NA	NA	424.68	433.72 - 423.72 (10.00 - 20.00)	NA	
3Q11		7/5/2011	NE	18.37	NA	NA	NA	425.35		NA	
4Q11		10/5/2011	NE	NE	NA	NA	NA	NA		NA	Well Dry
1Q12		1/3/2012	NE	19.81	NA	NA	NA	423.91		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
S-1											
2Q11	443.79	4/25/2011	38.70	38.73	405.06	405.09	0.03	405.08	Unknown	NA	
3Q11		7/5/2011	36.50	36.54	407.25	407.29	0.04	407.28		NA	
4Q11		10/6/2011	NE	36.68	NA	NA	NA	407.11		NA	
1Q12		1/3/2012	NE	38.36	NA	NA	NA	405.43		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	
T-1											
2Q11	444.55	4/25/2011	NE	46.65	NA	NA	NA	397.90	398.40 - 388.40 (43.91 - 53.91)	NA	
3Q11		7/5/2011	NE	35.99	NA	NA	NA	408.56		NA	*
4Q11		10/6/2011	NE	50.83	NA	NA	NA	393.72		NA	
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	*
T-2											
2Q11	443.13	4/25/2011	NE	38.03	NA	NA	NA	405.10	392.63 - 372.48 (50.50 - 70.65)	NA	*
3Q11		7/5/2011	NE	35.89	NA	NA	NA	407.24		NA	*
4Q11		10/6/2011	NE	35.97	NA	NA	NA	407.16		NA	*
1Q12		1/3/2012	NE	34.44	NA	NA	NA	408.69		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	*

Table 1a
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-3											
2Q11	450.91	4/1/2011	NE	46.50	NA	NA	NA	404.41	403.65 - 388.65 (47.26 - 62.26)	NA	*
3Q11		7/5/2011	NE	43.85	NA	NA	NA	407.06		NA	*
4Q11		10/6/2011	NE	45.68	NA	NA	NA	405.23		NA	*
1Q12		1/4/2012	NE	45.83	NA	NA	NA	405.08		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	
T-4											
2Q11	447.95	4/1/2011	NE	42.23	NA	NA	NA	405.72	398.24 - 383.24 (49.71 - 64.71)	NA	*
3Q11		7/5/2011	NE	39.83	NA	NA	NA	408.12		NA	*
4Q11		10/6/2011	NE	42.04	NA	NA	NA	405.91		NA	*
1Q12		1/3/2012	NE	43.35	NA	NA	NA	404.60		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	
T-5											
2Q11	443.46	4/1/2011	NE	37.30	NA	NA	NA	406.16	395.13 - 378.58 (48.33 - 64.88)	NA	*
3Q11		7/5/2011	NE	35.28	NA	NA	NA	408.18		NA	*
4Q11		10/6/2011	NE	35.84	NA	NA	NA	407.62		NA	*
1Q12		1/3/2012	NE	37.31	NA	NA	NA	406.15		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	*
T-6											
2Q11	446.55	4/25/2011	NE	42.01	NA	NA	NA	404.54	394.79 - 380.54 (51.76 - 66.01)	NA	*
3Q11		7/5/2011	NE	39.58	NA	NA	NA	406.97		NA	*
4Q11		10/6/2011	NE	39.26	NA	NA	NA	407.29		NA	*
1Q12		1/4/2012	NE	41.46	NA	NA	NA	405.09		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	*
T-7											
2Q11	444.01	4/1/2011	37.20	37.25	406.76	406.81	0.05	406.80	395.29 - 380.29 (48.72 - 63.72)	NA	*
3Q11		7/5/2011	35.08	35.16	408.85	408.93	0.08	408.91		NA	*
4Q11		10/5/2011	35.36	35.43	408.58	408.65	0.07	408.64		NA	*
1Q12		1/4/2012	37.05	37.08	406.93	406.96	0.03	406.95		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	*

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T-12											
2Q11	444.69	4/25/2011	NE	41.40	NA	NA	NA	403.29	398.23 - 372.23 (46.46 - 72.46)	NA	*
3Q11		7/5/2011	NE	39.07	NA	NA	NA	405.62		NA	*
4Q11		10/6/2011	NE	38.23	NA	NA	NA	406.46		NA	*
1Q12		1/4/2012	NE	40.64	NA	NA	NA	404.05		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	*
T-13											
2Q11	443.46	4/25/2011	NE	38.25	NA	NA	NA	405.21	396.46 - 370.46 (47.00 - 73.00)	NA	*
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/5/2011	NE	35.78	NA	NA	NA	407.68		NA	*
1Q12		1/3/2012	NE	37.42	NA	NA	NA	406.04		NA	*
2Q12		4/2/2012	NM	NM	NA	NA	NA	NA		0.0	
3Q12		7/2/2012	NM	NM	NA	NA	NA	NA		0.0	
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	*
T-15											
2Q11	445.03	4/1/2011	NE	39.55	NA	NA	NA	405.48	396.99 - 370.99 (48.04 - 74.04)	NA	*
3Q11		7/5/2011	NE	37.35	NA	NA	NA	407.68		NA	*
4Q11		10/6/2011	NE	37.79	NA	NA	NA	407.24		NA	*
1Q12		1/3/2012	NE	38.97	NA	NA	NA	406.06		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	*
T-17											
2Q11	445.90	4/1/2011	NE	37.30	NA	NA	NA	408.60	401.80 - 375.80 (44.10 - 70.10)	NA	*
3Q11		7/5/2011	NE	35.17	NA	NA	NA	410.73		NA	*
4Q11		10/6/2011	NE	36.23	NA	NA	NA	409.67		NA	*
1Q12		1/3/2012	NE	37.37	NA	NA	NA	408.53		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	*
T-19											
2Q11	446.71	4/1/2011	40.88	40.90	405.81	405.83	0.02	405.83	395.94 - 369.94 (50.77 - 76.77)	NA	*
3Q11		7/5/2011	38.47	38.50	408.21	408.24	0.03	408.23		NA	*
4Q11		10/6/2011	40.65	40.69	406.02	406.06	0.04	406.05		NA	*
1Q12		1/3/2012	41.97	41.98	404.73	404.74	0.01	404.74		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	*

Table 1a
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											
2Q11	444.00	4/1/2011	NE	29.83	NA	NA	NA	414.17	412.04 - 386.04 (31.96 - 57.96)	NA	*
3Q11		7/5/2011	NE	28.17	NA	NA	NA	415.83		NA	*
4Q11		10/5/2011	NE	28.41	NA	NA	NA	415.59		NA	*
1Q12		1/4/2012	NE	29.56	NA	NA	NA	414.44		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	
T-22											
2Q11	442.21	4/1/2011	NE	30.96	NA	NA	NA	411.25	410.66 - 384.96 (31.55 - 57.25)	NA	*
3Q11		7/5/2011	NE	29.00	NA	NA	NA	413.21		NA	*
4Q11		10/5/2011	NE	29.51	NA	NA	NA	412.70		NA	*
1Q12		1/4/2012	NE	30.91	NA	NA	NA	411.30		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	
T-23											
2Q11	432.64	4/1/2011	NE	23.40	NA	NA	NA	409.24	405.41 - 379.41 (27.23 - 53.23)	NA	*
3Q11		7/5/2011	NE	21.22	NA	NA	NA	411.42		NA	*
4Q11		10/5/2011	NE	22.21	NA	NA	NA	410.43		NA	*
1Q12		1/3/2012	NE	23.75	NA	NA	NA	408.89		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	
T-24											
2Q11	443.72	4/25/2011	NE	39.98	NA	NA	NA	403.74	402.22 - 376.57 (41.50 - 67.15)	NA	*
3Q11		7/5/2011	NE	37.53	NA	NA	NA	406.19		NA	*
4Q11		10/6/2011	NE	37.29	NA	NA	NA	406.43		NA	*
1Q12		1/3/2012	NE	38.36	NA	NA	NA	405.36		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	
T-28											
2Q11	444.22	4/1/2011	NE	37.18	NA	NA	NA	407.04	Unknown	NA	
3Q11		7/5/2011	NE	34.89	NA	NA	NA	409.33		NA	
4Q11		10/6/2011	NE	35.98	NA	NA	NA	408.24		NA	
1Q12		1/3/2012	NE	36.98	NA	NA	NA	407.24		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	

Table 1a
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-37											
2Q11	447.15	4/1/2011	NE	37.63	NA	NA	NA	409.52	398.30 - 378.30 (48.86 - 68.86)	NA	*
3Q11		7/5/2011	NE	35.84	NA	NA	NA	411.31		NA	*
4Q11		10/6/2011	NE	36.90	NA	NA	NA	410.25		NA	*
1Q12		1/3/2012	NE	37.95	NA	NA	NA	409.20		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	*
T-38											
2Q11	445.62	4/1/2011	NM	NM	NA	NA	NA	NA	396.48 - 376.48 (49.14 - 69.14)	NM	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/6/2011	NE	34.38	NA	NA	NA	411.24		NA	*
1Q12		1/3/2012	NE	35.40	NA	NA	NA	410.22		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	*
T-62											
2Q11	431.73	4/25/2011	NE	25.33	NA	NA	NA	406.40	412.02 - 382.02 (19.71 - 49.71)	NA	
3Q11		7/5/2011	NE	22.37	NA	NA	NA	409.36		NA	
4Q11		10/5/2011	NE	23.46	NA	NA	NA	408.27		NA	
1Q12		1/3/2012	NE	25.62	NA	NA	NA	406.11		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	
T-63											
2Q11	431.24	4/25/2011	NM	NM	NA	NA	NA	NA	411.26 - 381.26 (19.98 - 49.98)	NM	
3Q11		7/5/2011	NM	NM	NA	NA	NA	NA		NM	
4Q11		10/5/2011	NE	23.28	NA	NA	NA	407.96		NA	
1Q12		1/3/2012	NE	25.60	NA	NA	NA	405.64		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	
T-64											
2Q11	428.80	4/1/2011	NM	NM	NA	NA	NA	NA	408.99 - 378.99 (19.81 - 49.81)	NM	
3Q11		7/5/2011	NE	19.06	NA	NA	NA	409.74		NA	*
4Q11		10/5/2011	NE	21.36	NA	NA	NA	407.44		NA	
1Q12		1/3/2012	NE	23.86	NA	NA	NA	404.94		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	

Table 1a
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-1-85											
4Q11	445.50	10/5/2011	NE	37.85	NA	NA	NA	407.65	369.70 - 359.70 (75.80 - 85.80)	NA	*
1Q12		1/3/2012	NE	39.80	NA	NA	NA	405.70		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		0.0	
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	*
PZ-1-101											
4Q11	445.52	10/5/2011	NE	37.83	NA	NA	NA	407.69	354.52 - 344.52 (91.00 - 101.00)	NA	*
1Q12		1/3/2012	NE	39.73	NA	NA	NA	405.79		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	*
PZ-2-70.5											
4Q11	443.15	10/5/2011	NE	35.74	NA	NA	NA	407.41	382.65 - 372.65 (60.50 - 70.50)	NA	*
1Q12		1/3/2012	NE	38.14	NA	NA	NA	405.01		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	*
PZ-2-84											
4Q11	443.12	10/5/2011	NE	35.71	NA	NA	NA	407.41	371.12 - 359.12 (72.00 - 84.00)	NA	*
1Q12		1/3/2012	NE	38.05	NA	NA	NA	405.07		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	*

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 identifi
3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detecto
4) NA = Not Applicable; NE = Not Encountered; NM = Not Measure
5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the we
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 Pro
7) Due to inclement weather at the beginning of January, the comprehensive quarterly gauging event for 1Q14 was performed during February 20

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Table 1b
1Q14 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	1/14/2014	NE	42.33	NA	NA	NA	400.32	393.85 - 383.85 (48.80 - 58.80)	36.1	*
		3/7/2014	NE	42.30	NA	NA	NA	400.35		3.3	*
MW-02											
Monthly	443.77	1/14/2014	NE	43.56	NA	NA	NA	400.21	393.90 - 383.90 (49.87 - 59.87)	64.2	*
		3/7/2014	NE	43.42	NA	NA	NA	400.35		22.0	*
MW-03											
Monthly	430.08	1/13/2014	NE	29.39	NA	NA	NA	400.69	395.41 - 385.41 (34.67 - 44.67)	0.2	*
		3/7/2014	NE	29.71	NA	NA	NA	400.37		1.9	*
MW-04											
Monthly	441.14	1/13/2014	NE	40.54	NA	NA	NA	400.60	395.08 - 385.08 (46.06 - 56.06)	83.5	*
		3/7/2014	NE	47.50	NA	NA	NA	393.64		75.4	
MW-05											
Monthly	429.80	1/13/2014	NE	29.05	NA	NA	NA	400.75	395.83 - 385.83 (33.97 - 43.97)	0.2	*
		3/7/2014	NE	29.39	NA	NA	NA	400.41		0.5	*
MW-06A											
Monthly	432.14	1/13/2014	NE	31.08	NA	NA	NA	401.06	397.31 - 387.31 (34.83 - 44.83)	0.0	*
		3/7/2014	NE	31.47	NA	NA	NA	400.67		6.3	*
MW-06B											
Monthly	432.29	1/13/2014	NE	31.11	NA	NA	NA	401.18	368.24 - 363.24 (64.05 - 69.05)	0.0	*
		3/7/2014	NE	31.51	NA	NA	NA	400.78		43.4	*
MW-06C											
Monthly	432.11	1/13/2014	NE	30.91	NA	NA	NA	401.20	347.16 - 342.16 (84.95 - 89.95)	0.0	*
		3/7/2014	NE	31.31	NA	NA	NA	400.80		24.2	*
MW-06D											
Monthly	431.99	1/13/2014	NE	30.76	NA	NA	NA	401.23	327.27 - 322.27 (104.72 - 109.72)	0.0	*
		3/7/2014	NE	31.09	NA	NA	NA	400.90		33.7	*
MW-07											
Monthly	443.10	1/13/2014	NE	42.45	NA	NA	NA	400.65	400.18 - 390.18 (42.92 - 52.92)	106.3	*
		3/7/2014	NE	42.66	NA	NA	NA	400.44		814.0	*
MW-08											
Monthly	434.11	1/14/2014	NE	33.53	NA	NA	NA	400.58	400.51 - 390.51 (33.60 - 43.60)	237.3	*
		3/7/2014	NE	33.76	NA	NA	NA	400.35		5.6	
MW-09											
Monthly	445.20	1/13/2014	NE	43.93	NA	NA	NA	401.27	398.75 - 388.75 (46.45 - 56.45)	0.0	*
		3/6/2014	NE	44.31	NA	NA	NA	400.89		0.0	*
MW-10											
Monthly	445.03	1/13/2014	NE	43.81	NA	NA	NA	401.22	400.60 - 390.60 (44.43 - 54.43)	0.0	*
		3/6/2014	NE	44.12	NA	NA	NA	400.91		0.0	*
MW-11											
Monthly	442.33	1/13/2014	NE	41.65	NA	NA	NA	400.68	400.67 - 390.67 (41.66 - 51.66)	0.0	*
		3/7/2014	NE	41.72	NA	NA	NA	400.61		0.9	
MW-12											
Monthly	442.60	1/14/2014	NE	42.08	NA	NA	NA	400.52	400.68 - 390.68 (41.92 - 51.92)	0.4	
		3/7/2014	NE	42.15	NA	NA	NA	400.45		0.5	
MW-13											
Monthly	430.27	1/14/2014	NE	29.10	NA	NA	NA	401.17	404.70 - 394.70 (25.57 - 35.57)	14.5	
MW-14											
Monthly	434.44	1/14/2014	NE	33.13	NA	NA	NA	401.31	401.02 - 391.02 (33.42 - 43.42)	35.0	*
		3/7/2014	NE	33.50	NA	NA	NA	400.94		53.6	
MW-16											
Monthly	443.39	1/13/2014	NE	43.27	NA	NA	NA	400.12	406.33 - 396.33 (37.06 - 47.06)	0.0	
		3/7/2014	NE	43.07	NA	NA	NA	400.32		0.5	
MW-17											
Monthly	441.57	1/13/2014	NE	41.81	NA	NA	NA	399.76	407.28 - 392.28 (34.29 - 49.29)	0.1	
		3/7/2014	NE	41.10	NA	NA	NA	400.47		0.2	
MW-18											
Monthly	442.04	1/13/2014	NE	42.50	NA	NA	NA	399.54	407.12 - 392.12 (34.92 - 49.92)	0.0	
		3/7/2014	NE	41.67	NA	NA	NA	400.37		0.1	
MW-19											
Weekly	442.77	1/6/2014	NM	NM	NA	NA	NA	NA	406.43 - 391.43 (36.34 - 51.34)	NM	
Monthly		1/13/2014	NE	42.94	NA	NA	NA	399.83		0.0	
Weekly		1/20/2014	NE	43.14	NA	NA	NA	399.63		0.1	
		1/28/2014	NE	43.42	NA	NA	NA	399.35		0.0	
		2/6/2014	NE	43.52	NA	NA	NA	399.25		0.5	
		2/19/2014	NE	43.53	NA	NA	NA	399.24		0.0	
		2/24/2014	NE	42.90	NA	NA	NA	399.87		11.3	
Monthly		3/7/2014	NE	42.42	NA	NA	NA	400.35		0.2	
Weekly		3/10/2014	NE	42.38	NA	NA	NA	400.39		0.3	
		3/17/2014	NE	42.74	NA	NA	NA	400.03		0.3	
		3/24/2014	NE	42.90	NA	NA	NA	399.87		0.3	

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Table 1b
1Q14 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-20											
Monthly	443.67	1/13/2014	NE	43.60	NA	NA	NA	400.07	407.79 - 392.79 (35.88 - 50.88)	0.0	
		3/7/2014	NE	43.34	NA	NA	NA	400.33		0.1	
MW-21											
Monthly	443.81	1/13/2014	NE	43.36	NA	NA	NA	400.45	408.80 - 393.80 (35.01 - 50.01)	0.0	
		3/7/2014	NE	43.49	NA	NA	NA	400.32		3.7	
MW-22											
Weekly	442.16	1/10/2014	NM	NM	NA	NA	NA	NA	404.28 - 394.28 (37.88 - 47.88)	NM	
Monthly		1/13/2014	NE	41.99	NA	NA	NA	400.17		4.0	
Weekly		1/20/2014	NE	42.13	NA	NA	NA	400.03		0.1	
		1/28/2014	NE	42.48	NA	NA	NA	399.68		0.2	
		2/6/2014	NE	42.54	NA	NA	NA	399.62		1.3	
		2/20/2014	NE	42.42	NA	NA	NA	399.74		0.0	
		2/24/2014	NE	42.18	NA	NA	NA	399.98		69.6	
Monthly		3/7/2014	NM	NM	NA	NA	NA	NA		NM	
Weekly		3/10/2014	NE	41.75	NA	NA	NA	400.41		0.5	
		3/21/2014	NE	42.03	NA	NA	NA	400.13		2.7	
		3/25/2014	NE	42.34	NA	NA	NA	399.82		0.0	
MW-24											
Monthly	443.42	1/15/2014	NE	43.05	NA	NA	NA	400.37	404.53 - 394.53 (38.89 - 48.89)	4.3	
		3/7/2014	NE	43.04	NA	NA	NA	400.38		57.9	
P-54											
Monthly	442.18	1/13/2014	NE	41.65	NA	NA	NA	400.53	404.18 - 379.18 (38.00 - 63.00)	0.0	
		3/7/2014	NE	41.90	NA	NA	NA	400.28		0.2	
P-55											
Monthly	443.78	1/14/2014	42.90	43.60	400.18	400.88	0.70	400.74	403.35 - 393.35 (40.43 - 50.43)	133.6	
Weekly		1/20/2014	42.98	43.35	400.43	400.80	0.37	400.73		0.0	
		1/28/2014	43.30	43.76	400.02	400.48	0.46	400.39		106.8	
		2/6/2014	43.62	43.80	399.98	400.16	0.18	400.12		95.2	
		2/20/2014	43.39	43.58	400.20	400.39	0.19	400.35		178.0	
		2/24/2014	43.37	43.47	400.31	400.41	0.10	400.39		112.0	
Monthly		3/7/2014	NE	43.01	NA	NA	NA	400.77		117.0	
Weekly		3/10/2014	43.05	43.20	400.58	400.73	0.15	400.70		179.1	
		3/17/2014	43.26	43.43	400.35	400.52	0.17	400.49		118.4	
		3/24/2014	43.42	43.57	400.21	400.36	0.15	400.33		94.5	
P-56											
Monthly	446.02	1/14/2014	NE	46.15	NA	NA	NA	399.87	405.20 - 380.20 (40.82 - 65.82)	2.2	
		3/7/2014	NE	45.77	NA	NA	NA	400.25		0.5	
P-57											
Monthly	446.53	1/14/2014	NE	46.20	NA	NA	NA	400.33	406.07 - 381.07 (40.46 - 65.46)	4.6	
		3/7/2014	NE	46.20	NA	NA	NA	400.33		14.2	
P-58											
Monthly	444.92	1/14/2014	NE	44.26	NA	NA	NA	400.66	404.70 - 379.70 (40.21 - 65.21)	0.1	
		3/7/2014	NE	44.43	NA	NA	NA	400.49		2.0	
P-59											
Monthly	446.78	1/14/2014	NE	47.20	NA	NA	NA	399.58	398.87 - 373.87 (47.91 - 72.91)	238.4	*
		3/7/2014	NE	46.49	NA	NA	NA	400.29		235.5	*
P-60											
Weekly	446.57	1/6/2014	NM	NM	NA	NA	NA	NA	403.12 - 383.12 (43.45 - 63.45)	NM	
Monthly		1/14/2014	46.58	46.68	399.89	399.99	0.10	399.97		201.6	
Weekly		1/20/2014	46.64	46.74	399.83	399.93	0.10	399.91		48.9	
		1/28/2014	46.85	46.94	399.63	399.72	0.09	399.70		81.9	
		2/6/2014	47.10	47.19	399.38	399.47	0.09	399.45		74.5	
		2/20/2014	46.75	47.86	398.71	399.82	1.11	399.60		0.6	
		2/24/2014	NE	46.47	NA	NA	NA	400.10		29.9	
Monthly		3/7/2014	NE	46.08	NA	NA	NA	400.49		1.0	
Weekly		3/10/2014	46.12	46.14	400.43	400.45	0.02	400.45		4.5	
		3/17/2014	46.37	46.39	400.18	400.20	0.02	400.20		10.0	
		3/24/2014	46.49	46.51	400.06	400.08	0.02	400.08		8.7	
P-60-11											
Monthly	446.18	1/14/2014	NE	44.78	NA	NA	NA	401.40	413.03 - 383.03 (33.15 - 63.15)	1.3	
		3/7/2014	NE	44.95	NA	NA	NA	401.23		0.2	
P-60-12											
Monthly	443.31	1/14/2014	NE	43.36	NA	NA	NA	399.95	383.31 - 373.31 (60.00 - 70.00)	38.1	*
		3/7/2014	NE	42.85	NA	NA	NA	400.46		76.6	*
P-60-12S											
Monthly	443.33	1/14/2014	NE	19.13	NA	NA	NA	424.20	429.49 - 419.49 (13.84 - 23.84)	5.2	
		3/7/2014	NE		NA	NA	NA	NA		0.7	
P-60-13											
Monthly	442.43	1/14/2014	NE	41.82	NA	NA	NA	400.61	402.43 - 382.43 (40.00 - 60.00)	0.7	
		3/7/2014	NM	NM	NA	NA	NA	NA		0.1	

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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-60-13S											
Monthly	442.39	1/14/2014	NE	17.53	NA	NA	NA	424.86	432.39 - 422.39 (10.00 - 20.00)	0.5	
		3/7/2014	NM	NM	NA	NA	NA	NA		NM	
P-60-S											
Weekly	445.98	1/6/2014	NM	NM	NA	NA	NA	NA	410.50 - 395.50 (36.48 - 51.48)	NM	
Monthly		1/14/2014	45.24	46.54	400.44	401.74	1.30	401.48		0.3	
Weekly		1/20/2014	45.32	46.55	400.43	401.66	1.23	401.41		0.0	
		1/28/2014	45.61	46.59	400.39	401.37	0.98	401.17		0.0	
		2/6/2014	45.90	46.70	400.28	401.08	0.80	400.92		0.1	
		2/20/2014	45.60	46.02	400.96	401.38	0.42	401.30		277.5	
		2/24/2014	45.84	46.04	400.94	401.14	0.20	401.10		290.6	
Monthly		3/7/2014	NE	45.50	NA	NA	NA	401.48		0.0	
Weekly		3/10/2014	45.47	45.62	401.36	401.51	0.15	401.48		0.0	
		3/17/2014	44.59	44.73	402.25	402.39	0.14	402.36		0.0	
		3/24/2014	45.72	45.93	401.05	401.26	0.21	401.22		54.8	
P-66											
Monthly	436.70	1/14/2014	NE	35.89	NA	NA	NA	400.81	401.98 - 376.98 (34.72 - 59.72)	0.4	
P-68											
Monthly	445.07	1/14/2014	44.94	45.32	399.75	400.13	0.38	400.06	399.81 - 374.81 (45.26 - 70.26)	149.6	*
Weekly		1/24/2014	44.80	45.18	399.89	400.27	0.38	400.20		0.0	*
		1/28/2014	45.18	45.58	399.49	399.89	0.40	399.81		184.2	
		2/6/2014	45.50	45.74	399.33	399.57	0.24	399.52		193.0	
		2/20/2014	45.20	45.42	399.65	399.87	0.22	399.83		104.2	*
		2/24/2014	44.88	45.10	399.97	400.19	0.22	400.15		75.0	*
Monthly		3/7/2014	NE	44.55	NA	NA	NA	400.52		177.2	*
Weekly		3/10/2014	44.55	44.67	400.40	400.52	0.12	400.50		254.2	*
		3/17/2014	41.81	41.88	403.19	403.26	0.07	403.25		0.0	*
		3/24/2014	44.96	45.03	400.04	400.11	0.07	400.10		66.4	*
P-93A											
Monthly	446.58	1/14/2014	NE	46.13	NA	NA	NA	400.45	398.41 - 383.41 (48.17 - 63.17)	0.2	*
		3/7/2014	NE	46.21	NA	NA	NA	400.37		0.2	*
P-93B											
Monthly	446.46	1/14/2014	NE	46.19	NA	NA	NA	400.27	371.86 - 369.86 (74.60 - 76.60)	0.6	*
		3/7/2014	NE	46.22	NA	NA	NA	400.24		7.5	*
P-93C											
Monthly	446.51	1/14/2014	NE	46.06	NA	NA	NA	400.45	352.26 - 350.26 (94.26 - 96.26)	0.2	*
		3/7/2014	NE	46.14	NA	NA	NA	400.37		1.0	*
P-93D											
Monthly	446.89	1/14/2014	NE	46.21	NA	NA	NA	400.68	321.14 - 319.14 (125.75 - 127.75)	13.4	*
		3/7/2014	NE	46.30	NA	NA	NA	400.59		15.5	*
P-114											
Monthly	432.41	1/14/2014	NE	31.54	NA	NA	NA	400.87	399.73 - 379.73 (32.67 - 52.67)	0.0	*
GP-9-PZ											
Monthly	442.41	1/14/2014	NE	42.76	NA	NA	NA	399.65	404.81 - 394.81 (37.60 - 47.60)	3.2	
		3/7/2014	NE	42.17	NA	NA	NA	400.24		1.6	
ROST-3-MW											
Weekly	442.29	1/6/2014	NM	NM	NA	NA	NA	NA	404.48 - 394.48 (37.81 - 47.81)	NM	
Monthly		1/13/2014	NE	41.61	NA	NA	NA	400.68		0.2	
Weekly		1/20/2014	NE	41.86	NA	NA	NA	400.43		0.1	
		1/28/2014	NE	42.14	NA	NA	NA	400.15		0.0	
		2/6/2014	NE	42.22	NA	NA	NA	400.07		155.1	
		2/20/2014	NE	42.16	NA	NA	NA	400.13		379.0	
		2/24/2014	NE	42.14	NA	NA	NA	400.15		0.0	
Monthly		3/6/2014	NE	41.75	NA	NA	NA	400.54		11.5	
Weekly		3/10/2014	NE	41.68	NA	NA	NA	400.61		157.0	
		3/17/2014	NE	41.95	NA	NA	NA	400.34		6.1	
		3/24/2014	NE	42.11	NA	NA	NA	400.18		0.3	
ROST-4-PZ											
Weekly	442.13	1/6/2014	NM	NM	NA	NA	NA	NA	407.20 - 397.20 (34.93 - 44.93)	NM	
Monthly		1/13/2014	NE	40.07	NA	NA	NA	402.06		0.0	
Weekly		1/20/2014	NE	40.53	NA	NA	NA	401.60		0.0	
		1/28/2014	NE	40.94	NA	NA	NA	401.19		0.3	
		2/6/2014	NE	41.03	NA	NA	NA	401.10		0.7	
		2/20/2014	NE	40.87	NA	NA	NA	401.26		11.6	
		2/24/2014	NE	41.09	NA	NA	NA	401.04		0.5	
Monthly		3/7/2014	NE	40.71	NA	NA	NA	401.42		0.1	
Weekly		3/10/2014	NE	40.60	NA	NA	NA	401.53		6.2	
		3/17/2014	NE	40.81	NA	NA	NA	401.32		2.0	
		3/24/2014	NE	40.95	NA	NA	NA	401.18		1.3	

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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(A)											
Weekly	442.11	1/6/2014	NM	NM	NA	NA	NA	NA	407.34 - 397.34 (34.77 - 44.77)	NM	
Monthly		1/13/2014	NE	40.50	NA	NA	NA	401.61		10.7	
Weekly		1/20/2014	NE	40.76	NA	NA	NA	401.35		0.1	
		1/28/2014	NE	41.29	NA	NA	NA	400.82		0.0	
		2/6/2014	NE	41.52	NA	NA	NA	400.59		0.2	
		2/19/2014	NE	41.45	NA	NA	NA	400.66		0.0	
		2/24/2014	NE	41.36	NA	NA	NA	400.75		0.4	
Monthly		3/6/2014	NE	40.95	NA	NA	NA	401.16		0.0	
Weekly		3/10/2014	NE	40.80	NA	NA	NA	401.31		1.5	
		3/17/2014	NE	41.03	NA	NA	NA	401.08		0.6	
		3/24/2014	NE	41.22	NA	NA	NA	400.89		0.3	
ROST-4-PZ(B)											
Weekly	442.38	1/6/2014	NM	NM	NA	NA	NA	NA	407.33 - 397.33 (35.05 - 45.05)	NM	
Monthly		1/13/2014	NE	40.32	NA	NA	NA	402.06		0.0	
Weekly		1/20/2014	NE	40.47	NA	NA	NA	401.91		2.0	
		1/28/2014	NE	40.78	NA	NA	NA	401.60		0.0	
		2/6/2014	NE	40.91	NA	NA	NA	401.47		0.8	
		2/19/2014	NE	41.02	NA	NA	NA	401.36		0.4	
		2/24/2014	NE	40.97	NA	NA	NA	401.41		56.9	
Monthly		3/6/2014	NE	40.77	NA	NA	NA	401.61		0.8	
Weekly		3/10/2014	NE	40.66	NA	NA	NA	401.72		4.0	
		3/17/2014	NE	40.80	NA	NA	NA	401.58		0.0	
		3/24/2014	NE	40.91	NA	NA	NA	401.47		0.2	
ROST-4-PZ(C)											
Weekly	442.66	1/6/2014	NM	NM	NA	NA	NA	NA	407.71 - 397.71 (34.95 - 44.95)	NM	
Monthly		1/13/2014	NE	41.36	NA	NA	NA	401.30		0.0	
Weekly		1/20/2014	NE	41.77	NA	NA	NA	400.89		0.0	
		1/28/2014	NE	41.85	NA	NA	NA	400.81		0.3	
		2/6/2014	NE	41.91	NA	NA	NA	400.75		0.2	
		2/20/2014	NE	41.90	NA	NA	NA	400.76		0.5	
		2/24/2014	NE	42.02	NA	NA	NA	400.64		0.5	
Monthly		3/7/2014	NE	41.77	NA	NA	NA	400.89		0.0	
Weekly		3/10/2014	NE	41.63	NA	NA	NA	401.03		6.5	
		3/17/2014	NE	41.82	NA	NA	NA	400.84		0.7	
		3/24/2014	NE	41.95	NA	NA	NA	400.71		0.1	
ROST-4-PZ(D)											
Weekly	442.98	1/6/2014	NM	NM	NA	NA	NA	NA	408.01 - 398.01 (34.97 - 44.97)	NM	
Monthly		1/13/2014	NE	41.20	NA	NA	NA	401.78		0.0	
Weekly		1/20/2014	NE	41.32	NA	NA	NA	401.66		0.0	
		1/28/2014	NE	41.68	NA	NA	NA	401.30		0.4	
		2/6/2014	NE	41.78	NA	NA	NA	401.20		0.4	
		2/20/2014	NE	41.70	NA	NA	NA	401.28		2.4	
		2/24/2014	NE	41.88	NA	NA	NA	401.10		0.5	
Monthly		3/7/2014	NE	41.57	NA	NA	NA	401.41		0.1	
Weekly		3/10/2014	NE	41.41	NA	NA	NA	401.57		1.2	
		3/17/2014	NE	41.65	NA	NA	NA	401.33		2.7	
		3/24/2014	NE	41.80	NA	NA	NA	401.18		0.1	
ROST-4-PZ(E)											
Weekly	441.96	1/6/2014	NM	NM	NA	NA	NA	NA	407.21 - 397.21 (34.75 - 44.75)	NM	
Monthly		1/13/2014	NE	39.81	NA	NA	NA	402.15		0.1	
Weekly		1/20/2014	NE	40.40	NA	NA	NA	401.56		0.7	
		1/28/2014	NE	40.29	NA	NA	NA	401.67		0.0	
		2/6/2014	NE	40.24	NA	NA	NA	401.72		0.5	
		2/19/2014	NE	40.38	NA	NA	NA	401.58		0.1	
		2/24/2014	NE	40.36	NA	NA	NA	401.60		0.2	
Monthly		3/6/2014	NE	40.15	NA	NA	NA	401.81		0.0	
Weekly		3/10/2014	NE	40.11	NA	NA	NA	401.85		1.5	
		3/17/2014	NE	40.19	NA	NA	NA	401.77		0.7	
		3/24/2014	NE	40.23	NA	NA	NA	401.73		0.3	
ROST-4-PZ(F)											
Weekly	442.12	1/6/2014	NM	NM	NA	NA	NA	NA	407.59 - 397.59 (34.53 - 44.53)	NM	
Monthly		1/13/2014	NE	39.92	NA	NA	NA	402.20		0.0	
Weekly		1/20/2014	NE	40.01	NA	NA	NA	402.11		1.2	
		1/28/2014	NE	40.25	NA	NA	NA	401.87		1.4	
		2/6/2014	NE	40.28	NA	NA	NA	401.84		0.7	
		2/20/2014	NE	40.28	NA	NA	NA	401.84		0.7	
		2/24/2014	NE	40.28	NA	NA	NA	401.84		0.3	
Monthly		3/6/2014	NE	40.25	NA	NA	NA	401.87		0.5	
Weekly		3/10/2014	NE	40.21	NA	NA	NA	401.91		2.7	
		3/17/2014	NE	40.29	NA	NA	NA	401.83		1.2	
		3/24/2014	NE	40.34	NA	NA	NA	401.78		0.6	

SEE LAST PAGE OF TABLE FOR NOTES

Table 1b
1Q14 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(G)											
Weekly	442.13	1/6/2014	NM	NM	NA	NA	NA	NA	407.85 - 397.85 (34.28 - 44.28)	NM	
Monthly		1/13/2014	NE	41.84	NA	NA	NA	400.29		5.8	
Weekly		1/20/2014	NE	42.02	NA	NA	NA	400.11		1.2	
		1/28/2014	NE	42.30	NA	NA	NA	399.83		0.0	
		2/6/2014	NE	42.79	NA	NA	NA	399.34		0.7	
		2/20/2014	NE	42.25	NA	NA	NA	399.88		0.2	
		2/24/2014	NE	41.96	NA	NA	NA	400.17		1.5	
Monthly		3/6/2014	NE	41.51	NA	NA	NA	400.62		5.9	
Weekly		3/10/2014	NE	41.46	NA	NA	NA	400.67		3.4	
		3/17/2014	NE	41.95	NA	NA	NA	400.18		0.0	
		3/24/2014	NE	41.95	NA	NA	NA	400.18		0.1	
ROST-5-PZ											
Monthly	442.22	1/13/2014	NE	NE	NA	NA	NA	NA	429.02 - 419.02 (13.20 - 23.20)	0.0	
		3/7/2014	NE		NA	NA	NA	NA		1.3	
ROST-7-PZ											
Monthly	442.19	1/13/2014	NE	23.28	NA	NA	NA	418.91	422.19 - 412.19 (20.00 - 30.00)	0.0	
ROST-10-PZ											
Monthly	444.51	1/13/2014	NE	NE	NA	NA	NA	NA	434.51 - 424.51 (10.00 - 20.00)	0.0	
		3/7/2014	NE		NA	NA	NA	NA		0.0	
ROST-21-PZ											
Monthly	443.72	1/13/2014	NE	19.75	NA	NA	NA	423.97	433.72 - 423.72 (10.00 - 20.00)	0.0	
		3/7/2014	NE		NA	NA	NA	NA		0.6	
T-12											
Monthly	444.69	1/14/2014	NE	45.26	NA	NA	NA	399.43	398.23 - 372.23 (46.46 - 72.46)	2.3	*
		2/13/2014	NE	45.26	NA	NA	NA	399.43		0.5	*
		3/7/2014	NE	44.26	NA	NA	NA	400.43		1.0	*
PZ-1-85											
Monthly	445.50	1/13/2014	NE	44.26	NA	NA	NA	401.24	369.70 - 359.70 (75.80 - 85.80)	0.0	*
		3/6/2014	NE	44.63	NA	NA	NA	400.87		0.7	*
PZ-1-101											
Monthly	445.52	1/13/2014	NE	44.14	NA	NA	NA	401.38	354.52 - 344.52 (91.00 - 101.00)	0.0	*
		3/6/2014	NE	44.52	NA	NA	NA	401.00		0.8	*
PZ-2-70.5											
Monthly	443.15	1/13/2014	NE	42.58	NA	NA	NA	400.57	382.65 - 372.65 (60.5 - 70.5)	0.0	*
		3/7/2014	NE	42.70	NA	NA	NA	400.45		40.0	*
PZ-2-84											
Monthly	443.12	1/13/2014	NE	42.48	NA	NA	NA	400.64	371.12 - 359.12 (72.00 - 84.00)	0.0	*
		3/7/2014	NE	42.60	NA	NA	NA	400.52		0.4	*

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) NA = Not Applicable; NE = Not Encountered; NM = Not Measured
4) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.
5) Safety concerns and inclement weather (snow accumulations over 1 foot and subzero temperatures and wind chills) prevented routine gauging activities being performed during the week of 1/6/14.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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							
2Q11	6.69	27.11	1.459	138.1	1.03	157	
3Q11	6.68	30.81	*	*	0.08	0.03	
4Q11	6.62	16.52	1.021	7.70	0.00	0.02	
1Q12	6.64	18.37	1.180	13.32	0.00	0.02	
2Q12	6.61	19.00	2.194	3.02	0.00	41	
3Q12	6.65	20.03	0.997	2.01	0.09	29	
4Q12	6.63	18.38	3.346	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	2.192	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	-3.0	Initial Sample
	6.74	17.67	1.205	17.14	0.05	-38.0	Confirmation Sample
MW-02							
2Q11	6.75	20.82	1.313	168.5	0.09	-69	
3Q11	6.76	25.10	*	2.10	0.00	-0.28	
4Q11	6.67	17.71	1.126	29.40	0.00	-0.08	
1Q12	6.55	18.13	1.165	45.20	0.00	-1.0	
2Q12	6.61	19.70	2.462	41.55	0.00	-60	
3Q12	6.66	20.80	1.082	4.01	0.00	-26	
4Q12	6.61	18.86	3.887	6.41	0.00	-37	
1Q13	6.67	18.53	2.027	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	
MW-03							
2Q11	6.91	23.40	1.268	54.00	0.00	-74	
3Q11	7.15	34.21	1.280	0.00	0.00	195	
4Q11	6.75	17.94	1.151	0.89	0.07	-0.11	
1Q12	6.83	18.95	1.370	5.89	0.06	-0.09	
2Q12	6.72	19.61	2.219	2.26	0.00	-79	
3Q12	6.63	20.63	1.255	1.18	0.03	-67	
4Q12	6.80	20.10	2.205	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	Initial Sample
	6.95	18.63	1.373	6.56	0.24	-143	Confirmation Sample
MW-04							
2Q11	6.73	24.20	1.106	7.30	0.15	-57	
3Q11	6.60	38.84	*	6.10	0.00	-0.01	
4Q11	6.89	19.04	1.111	13.20	0.00	-0.07	
1Q12	6.81	18.62	0.955	3.40	0.00	-0.08	
2Q12	6.74	20.35	2.417	9.39	0.00	-58	
3Q12	6.60	19.94	1.137	9.69	0.00	-82	
4Q12	6.78	19.13	3.319	8.68	0.00	-66	
1Q13	6.83	18.75	2.516	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	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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							
2Q11	6.78	22.82	4.743	41.00	0.18	-68	
3Q11	6.88	25.11	*	9.80	0.00	0.29	
4Q11	6.70	17.87	0.956	10.03	0.02	-0.09	
1Q12	6.71	17.90	0.987	6.60	0.00	-13	
2Q12	6.68	19.74	1.956	4.57	0.00	-50	
3Q12	6.78	22.92	0.856	8.64	0.00	-120	
4Q12	6.79	18.67	2.428	8.72	0.00	-67	
1Q13	6.83	19.18	1.925	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	
MW-06A							
2Q11	6.72	17.98	1.049	8.20	0.07	-61	
3Q11	6.82	30.26	*	6.40	0.06	0.19	
4Q11	6.73	18.39	1.319	7.97	0.01	-0.10	
1Q12	6.64	17.62	1.295	6.30	0.00	-0.07	
2Q12	6.52	20.09	2.045	6.24	0.00	-55	
3Q12	6.56	20.14	1.098	1.46	0.00	-37	
4Q12	6.65	19.52	1.965	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	
MW-06B							
2Q11	6.76	19.87	0.630	2.10	0.17	-54	
3Q11	6.85	25.55	*	20.50	0.00	0.44	
4Q11	6.86	18.30	1.059	1.35	0.11	-0.06	
1Q12	6.90	17.13	1.080	10.59	0.00	-0.06	
2Q12	6.80	19.60	2.251	3.07	0.00	-35	
3Q12	6.80	20.81	1.437	5.88	0.00	-42	
4Q12	6.89	19.49	2.344	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	
MW-06C							
2Q11	6.84	18.93	0.713	2.10	0.43	-72	
3Q11	*	26.07	*	0.80	0.00	0.02	
4Q11	6.90	18.08	1.095	7.00	0.07	-0.08	
1Q12	6.93	17.04	1.127	4.02	0.00	-0.08	
2Q12	6.87	19.09	1.921	1.71	0.00	-68	
3Q12	6.92	20.05	1.036	2.16	0.00	-55	
4Q12	6.94	19.04	2.426	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	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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-06D							
2Q11	6.86	18.82	0.614	13.20	0.09	-61	
3Q11	7.04	28.06	*	*	0.00	0.31	
4Q11	6.99	17.79	1.240	1.25	0.00	-107	
1Q12	6.94	16.69	1.192	5.48	0.02	-0.08	
2Q12	6.96	19.50	2.368	7.17	0.00	-77	
3Q12	6.43	20.56	1.030	1.05	0.04	-41	
4Q12	7.03	19.07	2.753	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	
MW-07							
2Q11	6.81	18.18	0.560	30.00	1.10	-53	
3Q11	6.83	18.79	*	19.00	*	0.01	
4Q11	6.65	19.79	1.100	2.22	0.28	-49	
1Q12	6.58	15.54	1.047	3.31	0.09	86	
2Q12	6.67	20.51	2.325	3.58	0.00	-31	
3Q12	6.69	21.88	1.062	1.69	0.03	-69	
4Q12	6.75	18.34	2.973	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	
MW-08							
2Q11	6.55	19.98	0.791	20.40	0.06	-64	
3Q11	*	19.18	*	62.50	4.64	-0.15	
4Q11	6.56	19.16	1.159	5.28	1.22	-0.03	
1Q12	6.46	16.89	1.593	3.04	0.02	8.0	
2Q12	6.52	20.05	2.262	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	4.075	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	
MW-09							
2Q11	6.73	18.14	1.138	15.00	0.05	-58	
3Q11	6.68	22.67	*	*	0.00	-0.08	
4Q11	6.66	18.84	1.012	366.2	0.20	-75	
1Q12	6.56	17.30	1.160	7.35	0.00	-27	
2Q12	6.62	20.12	2.821	5.46	0.00	-15	
3Q12	6.67	19.87	1.127	8.71	0.01	-39	
4Q12	6.69	17.19	3.368	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	Initial Sample
	6.73	18.72	1.311	0.74	0.03	-87	Confirmation Sample

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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-10							
2Q11	6.92	18.28	0.546	17.50	1.89	-48	
3Q11	6.93	21.44	*	*	0.00	-0.11	
4Q11	6.81	18.15	0.823	3.25	0.00	-0.10	
1Q12	6.76	18.29	0.973	28.75	0.00	-41	
2Q12	6.73	18.57	1.972	5.76	0.00	-63	
3Q12	6.87	21.46	0.623	2.57	0.02	-90	
4Q12	6.78	17.36	2.686	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	6.226	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	
MW-11							
2Q11	6.75	17.51	1.284	21.90	0.05	-90	
3Q11	*	19.34	*	7.10	0.00	0.06	
4Q11	6.78	17.01	1.099	20.33	0.01	-0.06	
1Q12	6.74	16.18	1.077	7.87	0.00	22	
2Q12	6.76	18.13	2.204	5.40	0.00	-68	
3Q12	6.67	21.27	1.158	1.15	0.06	-69	
4Q12	6.68	18.82	4.141	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	
MW-12							
2Q11	6.80	19.51	0.958	5.40	0.01	132	
3Q11	6.89	20.17	*	*	0.01	0.22	
4Q11	6.83	18.28	1.127	0.03	0.00	-0.10	
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	4.0	
4Q12	6.81	19.19	2.515	6.47	0.00	90	
1Q13	6.79	17.34	1.006	5.83	0.06	1.0	
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	
MW-13							
2Q11	6.79	21.28	0.713	48.00	0.07	-71	
3Q11	6.89	20.78	1.230	18.50	0.57	-130	
4Q11	6.65	20.01	1.115	5.25	0.00	-102	
1Q12	6.68	18.94	1.202	5.78	0.00	-0.06	
2Q12	6.66	20.78	2.374	6.11	0.00	-78	
3Q12	6.64	22.65	1.435	7.16	0.00	-96	
4Q12	6.60	20.73	3.041	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	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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-14							
4Q11	6.71	18.41	0.966	1783.0	0.00	-0.09	
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.64	20.65	2.151	9.70	0.00	5.0	
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	
MW-16							
1Q13	11.26	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	
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	
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	
P-54							
2Q11	6.74	17.70	0.885	48.00	1.62	-66	
3Q11	6.80	17.89	*	20.80	0.27	0.27	
4Q11	6.73	17.01	0.921	11.53	0.57	0.14	
1Q12	6.73	16.45	1.010	5.10	0.31	61	
2Q12	6.66	18.78	2.066	36.80	0.22	180	
3Q12	6.72	19.02	0.973	7.77	0.00	9.0	
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	
P-55							
4Q11	6.90	18.41	0.727	4.88	0.00	-0.13	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.86	15.22	0.706	1.56	0.08	-0.07	
2Q12	6.78	19.69	2.098	4.55	0.00	-43	
3Q12	NM	NM	NM	NM	NM	NM	
4Q12	NM	NM	NM	NM	NM	NM	
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.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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-56							
4Q11	6.68	18.24	1.063	1286.0	0.00	-0.12	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.53	16.08	1.012	4.68	0.04	-5.0	
2Q12	6.57	21.78	2.385	1.04	0.00	0.00	
3Q12	6.58	22.08	1.245	3.47	0.00	12	
4Q12	6.51	22.60	3.040	7.52	0.02	-7.0	
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	
P-57							
4Q11	6.60	18.87	1.220	220.7	0.00	-0.10	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.48	16.73	1.502	2.30	0.02	-73	
2Q12	6.55	19.24	2.718	2.28	0.00	-54	
3Q12	6.59	20.98	1.182	3.25	0.00	-5.0	
4Q12	6.59	18.72	3.841	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	
P-58							
4Q11	6.53	18.22	1.144	10.71	0.00	-0.06	Added to Interim GW Monitoring Program in 4Q11
1Q12	6.54	16.97	1.252	14.38	0.01	-0.03	
2Q12	6.50	19.08	2.978	10.20	0.00	-5.0	
3Q12	6.56	19.51	1.199	12.67	0.00	19	
4Q12	6.49	18.76	2.836	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	
P-59							
4Q11	6.71	18.22	1.211	38.94	0.00	-0.11	Added to Interim GW Monitoring Program 4Q11
1Q12	6.56	16.14	1.152	8.31	0.00	-26	
2Q12	6.59	19.27	2.582	3.30	0.00	-23	
3Q12	6.63	21.74	1.220	9.00	0.00	-79	
4Q12	6.57	17.90	2.977	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	
P-66							
4Q11	6.38	18.49	1.228	29.77	0.00	-0.10	Added to Interim GW Monitoring Program 4Q11
1Q12	NM	NM	NM	NM	NM	NM	Restricted Area.
2Q12	6.42	20.82	2.898	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	Initial Sample
	6.42	19.74	1.331	8.56	0.00	-100	Confirmation Sample

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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							
4Q11	6.54	18.49	0.502	15.49	0.00	-0.10	
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	1.0	
4Q12	6.60	18.13	2.047	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	
P-93A							
2Q11	6.63	18.30	0.670	9.55	NM	NM	
3Q11	*	18.72	1.690	23.40	NM	NM	
4Q11	6.68	16.16	2.517	12.80	2.96	-68	
1Q12	6.65	15.81	1.195	9.38	6.14	5.0	
2Q12	7.34	18.04	1.247	18.22	5.80	11	
3Q12	6.71	20.89	1.144	43.60	5.20	-13	
4Q12	6.63	20.47	3.042	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	
P-93B							
2Q11	6.64	19.20	0.757	0.11	NM	NM	
3Q11	7.38	21.60	1.330	14.60	NM	NM	
4Q11	6.87	17.38	1.551	2.40	3.34	-104	
1Q12	6.87	13.39	1.250	2.11	0.21	28	
2Q12	7.51	18.52	1.555	4.99	1.84	-32	
3Q12	6.76	19.61	1.973	3.28	0.12	-65	
4Q12	6.77	17.79	3.045	0.76	0.00	-48	
4Q12	6.78	18.27	2.904	0.00	0.02	19	
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	
P-93C							
2Q11	6.81	18.40	0.693	0.52	NM	NM	
3Q11	6.96	21.41	1.320	5.10	NM	NM	
4Q11	6.92	17.34	1.176	1.14	0.92	-77	
1Q12	6.84	15.44	1.100	0.01	3.94	94	
2Q12	7.69	18.41	1.139	4.39	1.11	-49	
3Q12	6.77	20.55	1.416	8.66	0.16	-45	
4Q12	6.78	18.27	2.904	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	

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2a
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-93D							
2Q11	6.89	16.70	0.710	0.16	NM	NM	
3Q11	6.68	20.90	1.410	0.86	NM	NM	
4Q11	6.99	18.13	1.224	0.00	0.00	-166	
1Q12	6.93	15.16	1.222	1.77	0.08	-23	
2Q12	6.93	19.04	2.254	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	
P-114							
3Q12	7.13	23.30	1.153	9.01	0.53	-64	
4Q12	7.12	21.18	2.274	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	
ROST-3-PZ							
2Q12	6.94	19.34	1.949	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	2.421	6.38	0.63	-9.0	
ROST-3-MW							
1Q13	*	16.92	0.723	6.82	0.00	-124	
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	Initial Sample
	6.92	16.98	0.963	9.33	0.13	-121	Confirmation Sample
ROST-4-PZ(C)							
2Q12	6.77	20.00	2.128	0.40	0.00	-1.0	Added to Interim GW Monitoring Program 2Q12
3Q12	6.74	21.56	0.976	6.67	0.04	-94	
4Q12	6.75	18.50	2.754	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	
T-12							
4Q11	6.87	16.98	0.919	6.28	0.00	-111	Added to Interim GW Monitoring Program 4Q11
1Q12	6.85	15.13	0.801	13.15	0.00	-0.09	
2Q12	6.66	17.63	2.382	1.18	0.00	-37	
3Q12	6.79	18.86	1.259	4.54	0.00	-125	
4Q12	6.68	16.69	3.955	1.47	0.00	-2.0	
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	

NOTES:
1) Field parameters were collected using the Troll 9500.
2) NM = Not Measured; NI = Not Installed
3) * = Equipment malfunction. Results are suspect.
4) Negative parameter readings for Turbidity and DO are recorded as zero.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2b
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
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	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
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.
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
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.
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

Notes:
1) NM = Not Measured

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]				0.7 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]		0.007 [3]
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-042911	4/29/2011	43.41 - 58.41	38.37	NE	<0.0145 U	0.0363		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.005	0.0053		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.005 UJ	0.00097		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW1-ROX-011414	1/14/2014	48.80 - 58.80	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-02	MW02-ROX-051011	5/10/2011	47.19 - 62.19	39.14	NE	<0.005	1.18		<0.005	<0.005	0.0029 J	0.0012 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0027 J	<0.001	<0.002	<0.0005	<0.025	1.24	<0.005	<0.005
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.05	1.98		<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	<0.005	<0.25	1.76	<0.05	<0.05
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.05	1.79		<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	<0.005	<0.25	1.57	<0.05	<0.05
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.005	0.0216		<0.005	<0.005	0.0106	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0121	<0.001	<0.002	<0.0005	<0.025	0.503	<0.005	<0.005
	MW2-ROX-011612	1/16/2012		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	<0.0025	<0.13	0.777	<0.025	<0.025
	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	<0.0025	<0.13	0.948	<0.025	<0.025
	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	<0.0005	<0.025	0.952	<0.005	<0.005
	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	<0.0025	<0.13	0.763	<0.025	<0.025
	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	<0.001	<0.05	0.676	<0.01	<0.01
	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	<0.0025	<0.13	0.91	<0.025	<0.025
	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	<0.0005		1.57	<0.005	<0.005
	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	<0.0005	<0.025	0.942	<0.005	<0.005
	MW2-ROX-012014	1/20/2014	49.87 - 59.87	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	<0.0005	<0.025	0.426	<0.005	<0.005
MW-03	MW03-ROX-051011	5/10/2011	30.98 - 45.98	24.79	NE	<0.005	0.013		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.005	0.00056		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW3-ROX-112911-DUP	11/29/2011		24.06	NE	<0.005	0.00052		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW3-ROX-011612	1/16/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	0.0025	<0.005	<0.005
	MW3-ROX-011614	1/16/2014	34.67 - 44.67	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	<0.0005	<0.025	<0.001	<0.005	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																			
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]				0.7 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]		0.007 [3]
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-051111	5/11/2011	42.63 - 57.63	36.19	NE	<0.005	0.0625		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.005	0.114		<0.005	<0.005	0.0058	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0023	<0.005	<0.005
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.005	0.108		<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	<0.0005	<0.025	0.0021	<0.005	<0.005
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.005	0.0381		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	0.0017 J	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	0.00082 J	<0.005	<0.005 UJ
	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	<0.0005	<0.025	0.00083 J	<0.005	<0.005 UJ
	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	<0.001	<0.05	<0.002	<0.01	<0.01
	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	<0.0005	<0.025	0.00052 J	<0.005	<0.005
	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	<0.0005	<0.025	0.00056 J	<0.005	<0.005
	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	<0.05	<2.5	<0.1	<0.5	<0.5
	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	<0.001	<0.05	<0.002	<0.01	<0.01
	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	<0.0005	<0.025	0.00081 J	<0.005	<0.005
	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	<0.001	<0.05	0.0015	<0.005	<0.005
	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	<0.005	<0.25	<0.01	<0.05 UJ	<0.05
	MW4-ROX-013014	1/30/2014	46.06 - 56.06	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	<0.0005	<0.025	0.00048 J	<0.005	<0.005
MW-05	MW05-ROX-051211	5/12/2011	31.13 - 46.13	23.98	NE	<0.005 UJ	0.0055		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.005	0.0222		<0.005	0.0054	0.0061	0.0078	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.005	0.0221		<0.005	0.0054	0.0061	0.0078	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<0.005 UJ	0.0109		<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	<0.0005		<0.001	<0.005	<0.005
	MW5-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW5-ROX-011714	1/17/2014	33.97 - 43.97	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	<0.0005	<0.025	<0.001	<0.005	<0.005

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-06A	MW6A-ROX-051611	5/16/2011	31.98 - 46.98	26.10	NE	<0.005 UJ	0.0031		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6A-ROX-072611	7/26/2011		23.76	NE	<0.005 U	0.0032		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.0059 UJ	0.0105 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	<0.0005		<0.001	<0.005	<0.005
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.005 UJ	0.0137 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	<0.0005		<0.001	<0.005	<0.005
	MW6A-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6A-ROX-011614	1/16/2014	34.83 - 44.83	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-06B	MW6B-ROX-051611	5/16/2011	64.05 - 69.05	25.95	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6B-ROX-051611-DUP	5/16/2011		25.95	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.005 UJ	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.05	0.961		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.01	<0.02 UJ	<0.05	<0.05	<0.01	<0.02	<0.005	<0.25	<0.01	<0.05	<0.05
	MW6B-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6B-ROX-011614	1/16/2014	64.05 - 69.05	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	<0.0005	<0.025	<0.001	<0.005	<0.005

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						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-06C	MW6C-ROX-051611	5/16/2011	84.95 - 89.95	25.76	NE	<0.005 UJ	0.0071		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6C-ROX-072411	7/24/2011		23.43	NE	<0.005 UJ	0.0027		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.005	0.0017		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6C-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ	<0.005 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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6C-ROX-011614	1/16/2014	84.95 - 89.95	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-06D	MW6D-ROX-051611	5/16/2011	104.72 - 109.72	25.60	NE	<0.005 UJ	0.002		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.005 UJ	0.0027		<0.005	<0.005	<0.005	<0.005	0.007	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.005	0.013		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6D-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ	<0.005 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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW6D-ROX-011614	1/16/2014	104.72 - 109.72	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	<0.0005	<0.025	<0.001	<0.005	<0.005

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-07	MW07-ROX-051311	5/13/2011	42.92 - 52.92	37.50	NE	<0.005 UJ	1030 J		<0.005 UJ	<0.005 UJ	0.0011 J J	0.0016 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	<0.0005 UJ	<0.025 UJ	0.0494 J	<0.005 UJ	<0.005 UJ
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.005	922 J		<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	<0.0005	<0.025	0.0487	<0.005	<0.005
	MW7-ROX-072411	7/24/2011		35.65	NE	<25 UJ	1840		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5	<25	<25
	MW-7-ROX-110211	11/2/2011		35.95	NE	<5	774		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<5	<1	<2	<0.5	<25	<1	<5	<5
	MW7-ROX-011812	1/18/2012		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	<0.0005	<0.025	0.0727	<0.005	<0.005
	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	<0.0005	<0.025	0.0718	<0.005	<0.005
	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	<0.05	<2.5	<0.1	<0.5	<0.5
	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	<0.005	<0.25	0.0619	<0.05	<0.05
	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	<1	<50	<2	<10	<10
	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	<1	<50	<2	<10	<10
	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	<2	<100	<4	<20	<20
	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	<2	<100	<4	<20	<20
	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	<1	<50	<2	<10	<10
	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	<1	<50	<2	<10	<10
	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	<0.001	<0.05	0.2 J	<0.005	<0.005
	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	<1	<50	<2	<10 UJ	<10
	MW7-ROX-013014	1/30/2014	42.92 - 52.92	42.94	NE	<25	1490		<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<1.3	<63	<2.5	<13	<13
MW-08	MW08-ROX-051311	5/13/2011	33.60 - 43.60	28.35	NE	<50	1310		<50	<50	<50	<50	<50	<10	<10	<20	<10	<20	<50	<50	<10	<20	<5	<250	<10	<50	<50
	MW08-ROX-051311D	5/13/2011		28.35	NE	<5	952 J		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<1	<5	<5
	MW8-ROX-072411	7/24/2011		26.02	NE	<25	1650		<25 UJ	<25	<25	<25	<25	<5	<5	<10	<5	<10 UJ	<25	<25	<5	<10	<2.5	<130	<5	<25	<25
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	<25 UJ	1860		<25	<25	<25	<25	<25	<5	<5	<10	<5	<10	<25	<25	<5	<10	<2.5	<130	<5	<25	<25
	MW-8-ROX-110211	11/2/2011		27.02	NE	<5	934		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2 UJ	<5	<5	<1	<2	<0.5	<25	<1	<5	<5
	MW8-ROX-011812	1/18/2012		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	<0.0005	<0.025	0.285	<0.005	<0.005
	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	<0.05	<2.5	0.393	<0.5	<0.5
	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	<0.05	<2.5	0.396	<0.5	<0.5
	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	<0.01	<0.5	0.249	<0.1	<0.1
	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	<0.005	<0.25	0.232	<0.05	<0.05
	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	<0.5	<25	<1	<5	<5
	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	<1	<50	<2	<10	<10
	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	<2.5	<130	<5	<25	<25
	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	<0.001	<0.05	0.508	<0.005	<0.005
	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	<0.001	<0.05	0.442 J	<0.005	<0.005
	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	<1	<50	<2	<10 UJ	<10
	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	<1	<50	<2	<10 UJ	<10
	MW8-ROX-013014	1/30/2014	33.60 - 43.60	34.02	NE	<25	721		<13	<13	<13	<13	<13	<2.5	<2.5	<5	<2.5	<5	<13	<13	<2.5	<5	<1.3	<63	<2.5	<13	<13
	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	<1.3	<63	<2.5	<13	<13

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]				0.7 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]		0.007 [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
MW-09	MW09-ROX-050611	5/6/2011	46.45 - 56.45	40.12	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 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.005 UJ	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW9-ROX-110111	11/1/2011		37.78	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 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW9-ROX-011612	1/16/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW9-ROX-011414	1/14/2014	46.45 - 56.45	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-10	MW10-ROX-042811	4/28/2011	44.43 - 54.43	40.20	NE	<0.0088 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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW10-ROX-072311	7/23/2011		38.01	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW10-ROX-110111	11/1/2011		37.72	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 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW10-ROX-011612	1/16/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.001		<0.005	<0.005	<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW10-ROX-011514	1/15/2014	44.43 - 54.43	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-11	MW11-ROX-050611	5/6/2011	41.66 - 51.66	37.60	NE	<0.005	0.00041 J		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW11-ROX-072411	7/24/2011		34.3	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW-11-ROX-110211	11/2/2011		35.44	NE	<0.005	0.0019		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW11-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW11-ROX-011514	1/15/2014	41.66 - 51.66	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	<0.0005	<0.025	<0.001	<0.005	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																			
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
			Screening Values (mg/L)				0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]				0.7 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]		0.007 [3]
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-051211	5/12/2011	41.92 - 51.92	37.58	NE	<0.005 UJ	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW12-ROX-072411	7/24/2011		35.55	NE	<0.005 UJ	<0.0005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.005 UJ	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW-12-ROX-110211	11/2/2011		35.70	NE	<0.005	0.0012		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW-12-ROX-110211-DUP	11/2/2011		35.70	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 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW12-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW12-ROX-011514	1/15/2014	41.92 - 51.92	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-13	MW13-ROX-051311	5/13/2011	25.57 - 35.57	23.65	NE	<0.005 UJ	0.0005 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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.005	<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.005	0.05		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW13-ROX-012012	1/20/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005 UJ	<0.025 UJ	<0.001 UJ	<0.005 UJ	<0.005 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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025 UJ	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	MW13-ROX-012914	1/29/2014	25.57 - 35.57	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	<0.0005	<0.025	<0.001	<0.005	<0.005
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW14-ROX-080312	8/3/2012		29.87	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	<0.0005	<0.025	0.00065 J	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW14-ROX-012914	1/29/2014	33.42 - 43.42	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	<0.0005	<0.025	<0.001	<0.005	<0.005

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
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	<0.0005	<0.025 UJ	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	MW16-ROX-011514	1/15/2014	37.06 - 47.06	43.39	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	<0.0005	<0.025	<0.001	<0.005	<0.005
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	<0.025	<1.3 UJ	3.45	<0.25	<0.25
	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	<0.025	<1.3 UJ	3.19	<0.25	<0.25
	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	<0.0005	<0.025	2.44	<0.005	<0.005
	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	<0.0005		2.07	<0.005	<0.005
	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	<0.0005		1.79	<0.005	<0.005
	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	<0.0005	<0.025	3.79	<0.005	<0.005 UJ
	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	<0.0005	<0.025	3.97	<0.005	<0.005 UJ
	MW22-ROX-012014	1/20/2014	37.88 - 47.88	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	<0.0005	<0.025	3.17	<0.005	<0.005
	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	<0.0005	<0.025	3.4	<0.005	<0.005
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	<0.0005	<0.025	0.0012	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	MW24-ROX-011514	1/15/2014	38.89 - 48.89	43.05	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	<0.0005	<0.025	<0.001	<0.005	<0.005
P-54	P54-ROX-051111	5/11/2011	38.00 - 63.00	37.37	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P54-ROX-072411	7/24/2011		35.38	NE	<0.005 UJ	0.0023		<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002 UJ	<0.001	<0.002	<0.005	<0.005 UJ	<0.001	<0.002	<0.0005	<0.025	<0.001	<0.005	<0.005
	P54-ROX-110311	11/3/2011		35.49	NE	<0.005	0.013		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P54-ROX-011712	1/17/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005		<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P54-ROX-011514	1/15/2014	38.00 - 63.00	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	<0.0005	<0.025	<0.001	<0.005	<0.005

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SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.005	0.152		<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	<0.0005	<0.025	0.0143	<0.005	<0.005
	P55-ROX-011912	1/19/2012		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	<0.0005	<0.025	0.0656	<0.005	<0.005
	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	<0.0005	<0.025	0.0683	<0.005	<0.005
	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	<0.0005	<0.025	0.41	<0.005	<0.005
	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	<0.01		0.316	<0.05	<0.01
	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	<0.0005	<0.025	0.366	<0.005	<0.005
	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	<0.001	<0.05	0.35	<0.01	<0.01
	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	<0.0005	<0.025	0.495	<0.005	<0.005 UJ
	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	<0.0005	<0.025	0.602	<0.005	<0.005
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.005	0.144		<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	<0.0005	<0.025	0.457 J	<0.005	<0.005
	P56-ROX-011912	1/19/2012		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	<0.0005	<0.025	0.227	<0.005	<0.005
	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	<0.0005	<0.025	1.14	<0.005	<0.005
	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	<0.0025		0.101	<0.025	<0.025
	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	<0.0005	<0.025	1.29	<0.005	<0.005
	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	<0.0025	<0.13	0.0088	<0.025	<0.025
	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	<0.001	<0.05	0.691	<0.01	<0.01
	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	<0.0005	<0.025	2	<0.005	<0.005
	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	0.001	<0.025	1.58	<0.005	<0.005
	P56-ROX-012214	1/22/2014	40.82 - 65.82	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	<0.0005	<0.025	0.305	<0.005	<0.005
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.5	123		<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	<0.05	<2.5	1.1	<0.5	<0.5
	P57-ROX-021312	2/13/2012		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	<0.25	<13	0.719	<2.5	<2.5
	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	<0.05	<2.5	1.07	<0.5	<0.5
	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	<0.025		0.795	<0.25	<0.25
	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	<0.0005		0.759 E	<0.005	<0.005
	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	<0.25	<13	1.09	<2.5	<2.5
	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	<0.25	<13	1.1	<2.5	<2.5
	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	<0.25	<13	1.19	<2.5	<2.5
	P57-ROX-071613	7/16/2013	40.46 - 65.46	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	<0.0005	<0.025	1.59	<0.005	<0.005 UJ
	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	<0.0005	<0.025	1.1	<0.005	<0.005
	P57-ROX-020314	2/3/2014	40.46 - 65.46	46.57	NE	<10	261		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	0.697 J	<5	<5

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																			
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																					
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.005	430		<0.005	<0.005	0.0148	0.0344	<0.005	<0.001	0.0014	<0.002	<0.001	<0.002	<0.005	0.0113	<0.001	<0.002	<0.0005	<0.025	<5	<0.005	<0.005
	P58-ROX-011912	1/19/2012		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	<0.0005	<0.025	0.97 J	<0.005	<0.005
	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	<0.0005	<0.025	1.03	<0.005	<0.005
	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	<0.05	<2.5	1.03	<0.5	<0.5
	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	<0.05	<2.5	1	<0.5	<0.5
	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	<0.01		0.889	<0.1	<0.1
	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	<0.005	<0.25	0.931	<0.05	<0.05
	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	<0.05	<2.5	0.844	<0.5	<0.5
	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	<0.5	<25	1.27	<5	<5
	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	<1	<50	1.28 J	<10	<10
	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	<0.0005	<0.025	1.07	<0.005	<0.005 UJ
	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	<0.0005	<0.025	1.53	<0.005	<0.005
	P58-ROX-020314	2/3/2014	40.21 - 65.21	44.66	NE	<10	496		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	0.767 J	<5	<5
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	<0.25	6.01		<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	<0.025	<1.3	1.49	<0.25	<0.25
	P59-ROX-011912	1/19/2012		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	<0.0005	<0.025	1.28	<0.005	<0.005
	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	<0.0005	<0.025	1.4	<0.005	<0.005
	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	<0.025	<1.3	1.93	<0.25	<0.25
	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	<0.01		1.74	<0.1	<0.1
	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	<0.05	<2.5	1.87	<0.5	<0.5
	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	<0.05	<2.5	1.94	<0.5	<0.5
	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	<0.025	<1.3	1.9	<0.25	<0.25
	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	<0.025	<1.3	2.85	<0.25	<0.25
	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	<0.025	<1.3	2.57	<0.25	<0.25
	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	<0.0005	<0.025	2.4	<0.005	<0.005 UJ
	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	<0.0005	<0.025	3.19	<0.005	<0.005
	P59-ROX-020314	2/3/2014	47.91 - 72.91	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	<0.01	<0.5	1.86	<0.1	<0.1
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<0.005	0.0171		<0.005	0.0153	0.0185	0.0063	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002 UJ	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0016	<0.005	<0.005
	P66-ROX-051012	5/10/2012		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	<0.0005	<0.025	0.0015	<0.005	<0.005
	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	<0.0005	<0.025	0.0013	<0.005	<0.005
	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	<0.0005	<0.025	0.0012	<0.005	<0.005
	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	<0.0005	<0.025	0.0014	<0.005	<0.005
	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	<0.0005	<0.025	0.0036	<0.005	<0.005
	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	<0.0005	<0.025	0.0022	<0.005	<0.005 UJ
	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	<0.0005	<0.025	0.0045	<0.005	<0.005
	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	<0.0005	<0.025	0.0016	<0.005	<0.005
	P66-ROX-012914	1/29/2014	34.72 - 59.72	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	<0.0005	<0.025	0.0013	<0.005	<0.005

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																			
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
					Screening Values (mg/L)		0.005 [1]		4.2 [1]	0.35 [3]			0.7 [1]	0.005 [1]	0.1 [1]		0.0002 [2]				0.7 [2]	0.005 [2]	0.001 [2]	0.0077 [1]	0.7 [1]		0.007 [3]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																					
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.005	5.02		<0.005	0.0242	<0.005	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.229	<0.005	<0.005
	P74-ROX-011912	1/19/2012		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	<0.0005	<0.025	0.0095	<0.005	<0.005
	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	<0.0005	<0.025	0.0081	<0.005	<0.005
	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	<0.005		0.0782	<0.05	<0.05
	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	<0.01	<0.5	0.0493	<0.1	<0.1
	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	<0.01	<0.5	0.0997	<0.1	<0.1
	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	<0.0005	<0.025	0.0086	<0.005	<0.005
	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	<0.0005	<0.025	0.0306	<0.005	<0.005
	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	<0.0005	<0.025	0.0653	<0.005	<0.005
	P74-ROX-012414	1/24/2014	44.43 - 69.43	43.28	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	<0.0005	<0.025	0.115	<0.005	<0.005
P-93A	P93A-ROX-050511	5/5/2011	48.17 - 63.17	41.88	NE	<0.005	551		<0.005	<0.005	0.0054 J	0.0133 J	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0034 J J	<0.001	<0.002	<0.0005	<0.025	<5	<0.005	<0.005
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.005	467		<0.005	<0.005	0.0071	0.0177	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0049 J	<0.001	<0.002	<0.0005	<0.025	<10	<0.005	<0.005
	P93A-ROX-102611	10/26/2011		39.43	NE	<0.005 UJ	543		<0.005	<0.005	0.006	0.015	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	0.0081	<0.001	<0.002	<0.0005	<0.025	0.304	<0.005	<0.005
	P93A-ROX-012012	1/20/2012		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	<0.0005	<0.025	0.185	<0.005	<0.005
	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	<0.0005 UJ	<0.025 UJ	0.38 J	<0.005 UJ	<0.005 UJ
	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	<0.0005	<0.025	0.225	<0.005	<0.005
	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	<0.05	<2.5	0.265	<0.5	<0.5
	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	<0.05	<2.5	0.262	<0.5	<0.5
	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	<0.25	<13 UJ	<0.5	<2.5	<2.5
	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	<0.25	<13 UJ	<0.5	<2.5	<2.5
	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	<0.25	<13	0.255 J	<2.5	<2.5
	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	<0.25	<13	<0.5	<2.5	<2.5
	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	<0.001	<0.05	0.162	<0.005	<0.005
	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	<0.0005	<0.025	0.264	<0.005	<0.005
	P93A-ROX-012914	1/29/2014	48.17 - 63.17	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	<0.25	<13	<0.5	<2.5	<2.5
P-93B	P93B-ROX-050511	5/5/2011	74.60 - 76.60	41.96	NE	<0.005	134		<0.005	<0.005	0.0045 J	<0.005	<0.005	<0.001	<0.001	<0.002	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.0005	<0.025	0.0169	<0.005	<0.005
	P93B-ROX-081811	8/18/2011		39.44	NE	<5	304		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<1	<5	<5
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.005 UJ	590		<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	<0.0005	<0.025	0.0533	<0.005	<0.005
	P93B-ROX-012012	1/20/2012		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	<0.0005	0.0831 J	0.0274 J	<0.005	<0.005
	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	<0.0005	<0.025	0.0379 J	<0.005	<0.005
	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	<0.0005	<0.025	0.0741	<0.005	<0.005
	P93B-ROX-110712	11/7/2012		44.98	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	<0.05	<2.5	<0.1	<0.5	<0.5
	P93B-ROX-110712-DUP	11/7/2012		44.98	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	<0.05	<2.5	0.0695 J	<0.5	<0.5
	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	<0.5	<25 UJ	<1	<5	<5
	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	<0.25	<13	<0.5	<2.5	<2.5
	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	<0.001	<0.05	0.0652	<0.005	<0.005
	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	<1	<50	<2	<10 UJ	<10
	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	<1	<50	<2	<10 UJ	<10
	P93B-ROX-012814	1/28/2014	74.60 - 76.60	46.58	NE	<10	242		<5	<5	<5	<5	<5	<1	<1	<2	<1	<2	<5	<5	<1	<2	<0.5	<25	<1	<5	<5
	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	<0.5	<25	<1	<5	<5

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																			
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																					
P-93C	P93C-ROX-050611	5/6/2011	94.26 - 96.26	41.84	NE	<0.005	15.7		<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	<0.0005	<0.025	0.0029	<0.005	<0.005
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.005	1.2		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.005 UJ	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P93C-ROX-012012	1/20/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025 UJ	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.001	<0.05	0.0041	<0.005	<0.005
	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	<0.025	<1.3	<0.05	<0.25	<0.25
	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	<0.0005	<0.025	<0.001	<0.005 UJ	<0.005
	P93C-ROX-012414	1/24/2014	94.26 - 96.26	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	<0.0005	<0.025	<0.001	<0.005	<0.005
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.005	0.0287		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.005	0.0059		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.005	0.00097		<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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P93D-ROX-012012	1/20/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	0.00069 J	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005 UJ
	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	<0.0005	<0.025	<0.001	<0.005 UJ	<0.005
	P93D-ROX-013114	1/31/2014	125.75 - 127.75	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	0.0044	<0.0005	<0.025	<0.001	<0.005	<0.005
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P114-ROX-012012	1/20/2012		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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025 UJ	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	<0.001	<0.005	<0.005
	P114-ROX-012814	1/28/2014	32.67 - 52.67	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	<0.0005	<0.025	<0.001	<0.005	<0.005

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs																				
						Acetone[5]	Benzene	Butane[6]	2-Butanone[5]	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	4-Chlorotoluene	Cymene (p-isopropyltoluene)	1,1-Dichloroethane	1,2-Dichloropropane	trans-1,3-Dichloropropene	1,4-Dioxane	Ethylbenzene	Ethyl methacrylate	Hexachlorobutadiene
Screening Values (mg/L)							**0.005** [1]		**4.2** [1]	**0.35** [3]			**0.7** [1]	**0.005** [1]	**0.1** [1]		**0.0002** [2]				**0.7** [2]	**0.005** [2]	**0.001** [2]	**0.0077** [1]	**0.7** [1]		**0.007** [3]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																				
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	<0.0005	<0.025	0.0167	<0.005	<0.005
	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	<0.0005	<0.025	0.0047	<0.005	<0.005
	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	<0.0005	<0.025	0.0018	<0.005	<0.005
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	<0.0005	<0.025 UJ	0.0296	<0.005	<0.005
	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	<0.0005	<0.025	0.0136	<0.005	<0.005
	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	<0.0005		0.218	<0.005	<0.005
	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	<0.0005	<0.025	0.0182	<0.005	<0.005 UJ
	ROST3MW-ROX-011714	1/17/2014	37.81 - 47.81	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	<0.0005	<0.025	0.008	<0.005	<0.005
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	<0.0005	<0.025	<0.001	<0.005	<0.005
	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	<0.0005	<0.025	0.177	<0.005	<0.005 UJ
	ROST4PZC-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	<0.0005	<0.025	0.0014	<0.005	<0.005
	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	<0.0005	<0.025	0.0013	<0.005	<0.005
	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 UJ	<0.0005 UJ	<0.025	0.0028 J	<0.005	<0.005
	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	<0.0005		0.0651	<0.005	<0.005
	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	<0.0005	<0.025	0.0064	<0.005	<0.005 UJ
	ROST4PZC-ROX-011714	1/17/2014	34.95 - 44.95	40.97	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	<0.0005	<0.025	0.0039	<0.005	<0.005
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.05	1.09		<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	<0.005	<0.25	0.648	<0.05	<0.05
	T12-ROX-011912	1/19/2012		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	<0.0005	<0.025	0.285	<0.005	<0.005
	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	<0.0025	<0.13	1.88	<0.025	<0.025
	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	<0.005		0.573	<0.05	<0.05
	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	<0.005	<0.25	1.73	<0.05	<0.05
	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	<0.0025	<0.13 UJ	0.426	<0.025	<0.025
	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	<0.005	<0.25	1.03	<0.05	<0.05
	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	<0.0005	<0.025	0.45	<0.005	<0.005 UJ
	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	<0.0025	<0.13	1.82	<0.025	<0.025
	T12-ROX-012414	1/24/2014	46.46 - 72.46	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	<0.0005	<0.025	0.518	<0.005	<0.005

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		Analytical Results		
MW-01	MW1-ROX-042911	4/29/2011	43.41 - 58.41	38.37	NE		<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	0.0016	<0.001	0.0016	<0.0063	<0.0063	<0.0063
	MW1-ROX-072711	7/27/2011		35.77	NE		<0.005		<0.005	<0.005	0.0055	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW1-ROX-120511	12/5/2011		37.10	NE		<0.005		<0.005	<0.005	0.0027	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE		<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	0.000077 J	0.000035 J	0.000062 J
	MW1-ROX-050112	5/1/2012		39.09	NE		<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	<0.0001	<0.0001	<0.0001
	MW1-ROX-073012	7/30/2012		39.39	NE		<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	<0.00011	<0.00011	<0.00011
	MW1-ROX-102612	10/26/2012		41.22	NE																				<0.00011	<0.00011	<0.00011
	MW1-ROX-121712	12/17/2012		41.22	NE		<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	0.0015	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000024 U	<0.0001	<0.0001
	MW1-ROX-040913	4/9/2013		42.55	NE		<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	<0.00011	<0.00011	<0.00011
	MW1-ROX-070813	7/8/2013		39.56	NE		<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	<0.000026 U	<0.0001	<0.0001
	MW1-ROX-100313	10/3/2013		40.28	NE		<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	<0.00011	<0.00011	<0.00011
	MW1-ROX-011414	1/14/2014	48.80 - 58.80	42.77	NE		<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	<0.00011	<0.00011	<0.00011
MW-02	MW02-ROX-051011	5/10/2011	47.19 - 62.19	39.14	NE		<0.005		0.0539	<0.005	<0.001	0.0545 J	0.0669	3.51	<0.005	<0.005	<0.001		0.339	0.103	<0.005	2.05	0.549	2.6	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW2-ROX-072711	7/27/2011		37.04	NE		<0.05		0.0995	<0.05	<0.01	0.0671	0.111	4.69	<0.05	<0.05	<0.01		0.338	0.116	<0.05	2.91	0.823	3.74	<0.0001	<0.0001	<0.0001
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE		<0.05		0.0967	<0.05	<0.01	0.0659	0.1	4.67	<0.05	<0.05	<0.01		0.298	0.108	<0.05	2.63	0.728	3.36	<0.0001	<0.0001	<0.0001
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE		<0.005		0.128	<0.005	<0.001	0.0777	0.146	0.0328	<0.005	<0.005	<0.001		0.407	0.212	<0.005	0.747	0.0574	0.804	<0.0001	<0.0001	<0.0001
	MW2-ROX-011612	1/16/2012		38.89	NE		<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	0.000057 J	<0.00011	<0.00011
	MW2-ROX-050112	5/1/2012		40.25	NE		<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	<0.0001	<0.0001	<0.0001
	MW2-ROX-073012	7/30/2012		40.60	NE		<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	0.000051 J	<0.00011	<0.00011
	MW2-ROX-102612	10/26/2012		42.35	NE		<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	0.000093 J	<0.00011	<0.00011
	MW2-ROX-011113	1/11/2013		42.94	NE		<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	0.00016	0.000019 J	<0.00011
	MW2-ROX-040913	4/9/2013		43.70	NE		<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	<0.00011	<0.00011	<0.00011
	MW2-ROX-071113	7/11/2013		40.82	NE		<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	0.000035 J	<0.00011	<0.00011
	MW2-ROX-100813	10/8/2013		41.73	NE		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	<0.00011	<0.00011	<0.00011
	MW2-ROX-012014	1/20/2014	49.87 - 59.87	44.00	NE		<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	<0.00011	0.00018	<0.00011
MW-03	MW03-ROX-051011	5/10/2011	30.98 - 45.98	24.79	NE		<0.005		<0.005	<0.005	0.0026	0.00011 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0022	<0.001	0.0022	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW3-ROX-080311	8/3/2011		22.72	NE		<0.005		0.0012 J	<0.005	<0.001	<0.000083 U	<0.005	0.0015	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095	<0.000095	<0.000095
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE		<0.005		<0.005	<0.005	0.0014	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW3-ROX-112911-DUP	11/29/2011		24.06	NE		<0.005		<0.005	<0.005	0.0014	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW3-ROX-011612	1/16/2012		24.93	NE		<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	<0.0001	<0.0001	0.000063 J
	MW3-ROX-043012	4/30/2012		26.19	NE		<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	<0.0001	<0.0001	<0.0001
	MW3-ROX-072712	7/27/2012		26.60	NE		<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	<0.00011	<0.00011	<0.00011
	MW3-ROX-102512	10/25/2012		28.39	NE		<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	<0.0001	<0.0001	<0.0001
	MW3-ROX-010913	1/9/2013		29.35	NE		<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	<0.0001	0.000023 J	0.000037 J
	MW3-ROX-040813	4/8/2013		29.74	NE		<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	<0.00011	<0.00011	<0.00011
	MW3-ROX-071113	7/11/2013		26.32	NE		<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	0.000028 J	<0.00011	<0.00011
	MW3-ROX-100813	10/8/2013		27.38	NE		<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	<0.00011	<0.00011	<0.00011
	MW3-ROX-011614	1/16/2014	34.67 - 44.67	29.91	NE		<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	<0.00011	<0.00011	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
			Screening Values (mg/L)			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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			Analytical Results	
MW-04	MW04-ROX-051111	5/11/2011	42.63 - 57.63	36.19	NE		<0.005		0.0036 J	<0.005	0.0096	<0.0001 UJ	0.0037 J	0.0125	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0096	0.0016	0.0111	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW4-ROX-072611	7/26/2011		34.15	NE		<0.005		0.0088	<0.005	0.0113	0.00025	0.0085	0.017	<0.005	<0.005	<0.001		<0.005	0.0052	<0.005	0.0067	<0.001	0.0067	<0.0001	<0.0001	<0.0001
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE		<0.005		0.0088	<0.005	0.0103	0.00021	0.0083	0.0162	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0063	<0.001	0.0063	<0.0001	<0.0001	<0.0001
	MW4-ROX-121511	12/15/2011		33.99	NE		<0.005		<0.005	<0.005	0.0073 J	0.00023	<0.005	0.0092	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	0.0069	0.001	0.0079	<0.0001	0.00011	<0.0001
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE		<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	<0.0001	<0.0001	0.00003 J
	MW4-ROX-050312	5/3/2012		37.45	NE		<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	<0.0001	<0.0001	<0.0001
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE		<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	<0.0001	<0.0001	<0.0001
	MW4-ROX-072512	7/25/2012		37.63	NE		<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	<0.0001	<0.0001	<0.0001
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE		<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	<0.0001	<0.0001	<0.0001
	MW4-ROX-102912	10/29/2012		39.45	NE		<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	<0.0001	<0.0001	<0.0001
	MW4-ROX-011113	1/11/2013		40.20	NE		<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	<0.00011	<0.00011	<0.00011
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE		<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	<0.00012	<0.00012	<0.00012
	MW4-ROX-030413	3/4/2013		40.20	NE		<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	0.112	<0.01	<0.01	0.0057	<0.01	<0.01	<0.002		<0.01	<0.01	<0.01	0.0052	<0.002	0.0062	<0.00011	<0.00011	<0.00011
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE		<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	<0.00011	<0.00011	<0.00011
	MW4-ROX-071713	7/17/2013		37.61	NE		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	<0.000036 U	<0.00011	<0.00011
	MW4-ROX-101613	10/16/2013		38.80	NE		<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	<0.00011	<0.00011	<0.00011
	MW4-ROX-013014	1/30/2014	46.06 - 56.06	41.09	NE		<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	<0.00011	<0.00011	<0.00011
MW-05	MW05-ROX-051211	5/12/2011	31.13 - 46.13	23.98	NE		<0.005		<0.005	<0.005	0.0085	<0.00011 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	0.0035	<0.001	0.0035	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ
	MW5-ROX-072611	7/26/2011		22.00	NE		<0.005		0.0161	<0.005	0.0031	<0.0001 U	0.0105	0.0017	<0.005	<0.005	<0.001		<0.005	0.0055	<0.005	0.0074	<0.001	0.0074	<0.0001	<0.0001	<0.0001
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE		<0.005		0.016	<0.005	0.0031	<0.00015 U	0.0104	0.0016	<0.005	<0.005	<0.001		<0.005	0.0055	<0.005	0.0068	<0.001	0.0068	<0.0001	<0.0001	<0.0001
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE		<0.005		<0.005	<0.005	0.0069	<0.00014 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW5-ROX-011712	1/17/2012		24.76	NE		<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	<0.00011	<0.00011	<0.00011
	MW5-ROX-050312	5/3/2012		25.89	NE		<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	<0.0001	<0.0001	<0.0001
	MW5-ROX-072512	7/25/2012		26.18	NE		<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	<0.0001	<0.0001	<0.0001
	MW5-ROX-102912	10/29/2012		28.16	NE		<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	<0.0001	<0.0001	<0.0001
	MW5-ROX-011113	1/11/2013		28.75	NE		<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	0.000071 J	0.000066 J	0.000028 J
	MW5-ROX-040913	4/9/2013		29.41	NE		<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	<0.00011	<0.00011	<0.00011
	MW5-ROX-070913	7/9/2013		26.04	NE		<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	<0.0001	<0.0001	<0.0001
	MW5-ROX-100813	10/8/2013		26.97	NE		<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	<0.00011	<0.00011	<0.00011
	MW5-ROX-011714	1/17/2014	33.97 - 43.97	29.59	NE		<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	<0.00011	<0.00011	<0.00011

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs														VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				Analytical Results		
MW-06A	MW6A-ROX-051611	5/16/2011	31.98 - 46.98	26.10	NE		<0.005 UJ		<0.005	<0.005	0.0277	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW6A-ROX-072611	7/26/2011		23.76	NE		<0.005		<0.005	<0.005	0.0237	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	0.00024	<0.0001	<0.0001
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE		<0.005		<0.005	<0.005	0.0169	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE		<0.005		<0.005	<0.005	0.0181	<0.0001	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW6A-ROX-011712	1/17/2012		26.74	NE		<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	<0.00011	<0.00011	<0.00011
	MW6A-ROX-050212	5/2/2012		27.77	NE		<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	<0.0001	<0.0001	<0.0001
	MW6A-ROX-080112	8/1/2012		28.36	NE		<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	<0.0001	<0.0001	<0.0001
	MW6A-ROX-102412	10/24/2012		30.06	NE		<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	<0.00011	<0.00011	<0.00011
	MW6A-ROX-011413	1/14/2013		31.00	NE		<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	<0.0001	<0.0001	<0.0001
	MW6A-ROX-040313	4/3/2013		31.62	NE		<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	<0.00011	<0.00011 UJ	<0.00011
	MW6A-ROX-070913	7/9/2013		28.25	NE		<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	<0.00011	<0.00011	<0.00011
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE		<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	<0.00011	<0.00011	<0.00011
	MW6A-ROX-100713	10/7/2013		28.87	NE		<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	0.0001 J	<0.00011	<0.00011
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE		<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	0.000093 J	<0.00011	<0.00011
	MW6A-ROX-011614	1/16/2014	34.83 - 44.83	31.62	NE		<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	<0.0001	<0.0001	<0.0001
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE		<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	<0.00011	<0.00011	<0.00011
MW-06B	MW6B-ROX-051611	5/16/2011	64.05 - 69.05	25.95	NE		<0.005 UJ		<0.005	<0.005	0.0029	<0.000095 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095 UJ	0.000098 J	<0.000095 UJ
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE		<0.005 UJ		<0.005	<0.005	0.0031	0.000044 J J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW6B-ROX-072311	7/23/2011		23.60	NE		<0.005		<0.005	<0.005	0.0049	0.0012 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW6B-ROX-110311	11/3/2011		24.67	NE		<0.05		<0.05	<0.05	0.036 J	<0.0001	<0.05	<0.01	<0.05	<0.05	<0.01		<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001
	MW6B-ROX-011712	1/17/2012		26.77	NE		<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	<0.00011	<0.00011	<0.00011
	MW6B-ROX-050212	5/2/2012		27.82	NE		<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	<0.0001	<0.0001	<0.0001
	MW6B-ROX-080112	8/1/2012		28.39	NE		<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	<0.0001	<0.0001	<0.0001
	MW6B-ROX-102412	10/24/2012		30.11	NE		<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	<0.0001	<0.0001	<0.0001
	MW6B-ROX-011713	1/17/2013		31.11	NE		<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	<0.0001	<0.0001	<0.0001
	MW6B-ROX-040313	4/3/2013		31.68	NE		<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	<0.00011	<0.00011 UJ	<0.00011
	MW6B-ROX-070913	7/9/2013		28.25	NE		<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	<0.00011	<0.00011	<0.00011
	MW6B-ROX-100713	10/7/2013		28.93	NE		<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	<0.00011	<0.00011	<0.00011
	MW6B-ROX-011614	1/16/2014	64.05 - 69.05	31.67	NE		<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	<0.00011	<0.00011	<0.00011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			Analytical Results		
MW-06C	MW6C-ROX-051611	5/16/2011	84.95 - 89.95	25.76	NE		<0.005 UJ		<0.005	<0.005	0.0034	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001 UJ	0.000046 J J	<0.0001 UJ
	MW6C-ROX-072411	7/24/2011		23.43	NE		<0.005		<0.005	<0.005	0.0027	0.00075 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW6C-ROX-110311	11/3/2011		24.47	NE		<0.005		<0.005	<0.005	0.0039 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	<0.0001	<0.0001	<0.0001
	MW6C-ROX-011712	1/17/2012		26.50	NE		<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	<0.00011	<0.00011	<0.00011
	MW6C-ROX-050212	5/2/2012		27.62	NE		<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	<0.0001	<0.0001	<0.0001
	MW6C-ROX-080112	8/1/2012		28.15	NE		<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	<0.0001	<0.0001	<0.0001
	MW6C-ROX-102412	10/24/2012		27.85	NE		<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	<0.0001	<0.0001	<0.0001
	MW6C-ROX-011713	1/17/2013		30.88	NE		<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	<0.0001	<0.0001	<0.0001
	MW6C-ROX-040313	4/3/2013		31.41	NE		<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	<0.0001	<0.0001 UJ	<0.0001
	MW6C-ROX-070913	7/9/2013		28.03	NE		<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	<0.00011	<0.00011	<0.00011
	MW6C-ROX-100713	10/7/2013		28.72	NE		<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	<0.00011	<0.00011	<0.00011
	MW6C-ROX-011614	1/16/2014	84.95 - 89.95	31.48	NE		<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	<0.00011	<0.00011	<0.00011
MW-06D	MW6D-ROX-051611	5/16/2011	104.72 - 109.72	25.60	NE		<0.005 UJ		<0.005	<0.005	<0.001	<0.00011 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ
	MW6D-ROX-072311	7/23/2011		23.29	NE		<0.005		<0.005	<0.005	<0.001	0.00074 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW6D-ROX-110311	11/3/2011		24.31	NE		<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	<0.0001	<0.0001	<0.0001
	MW6D-ROX-011712	1/17/2012		26.33	NE		<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	<0.00011	<0.00011	<0.00011
	MW6D-ROX-050212	5/2/2012		27.45	NE		<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	<0.0001	<0.0001	<0.0001
	MW6D-ROX-080212	8/2/2012		30.56	NE		<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	<0.0001	<0.0001	<0.0001
	MW6D-ROX-102412	10/24/2012		29.71	NE		<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	<0.0001	<0.0001	<0.0001
	MW6D-ROX-011713	1/17/2013		30.75	NE		<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	<0.0001	<0.0001	<0.0001
	MW6D-ROX-040313	4/3/2013		31.27	NE		<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	<0.00011	<0.00011 UJ	<0.00011
	MW6D-ROX-070913	7/9/2013		27.91	NE		<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	<0.00011	<0.00011	<0.00011
	MW6D-ROX-100713	10/7/2013		28.58	NE		<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	<0.00011	<0.00011	<0.00011
	MW6D-ROX-011614	1/16/2014	104.72 - 109.72	31.33	NE		<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	<0.0001	<0.0001	<0.0001

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						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				Analytical Results
MW-07	MW07-ROX-051311	5/13/2011	42.92 - 52.92	37.50	NE		<0.005 UJ		0.0061 J	<0.005 UJ	0.0109 J	0.0114 J	0.0078 J	0.128 J	<0.005 UJ	<0.005 UJ	<0.001 UJ		0.0822 J	0.0193 J	<0.005 UJ	0.101 J	0.0418 J	0.143 J	0.00011 J	<0.00011 UJ	0.000031 J J
	MW07-ROX-051311D	5/13/2011		37.50	NE		<0.005		0.006	<0.005	0.012	0.011 J	0.0078	0.126	<0.005	<0.005	<0.001		0.0825	0.0193	<0.005	0.0984	0.0405	0.139	0.00011 J	<0.00011 UJ	0.000034 J J
	MW7-ROX-072411	7/24/2011		35.65	NE		<25		<25	<25	<5	0.0081	<25	<5	<25	<25	<5		<25	<25	<25 UJ	<5	<5	<5	0.0001 J	<0.00011	<0.00011
	MW-7-ROX-110211	11/2/2011		35.95	NE		<5		<5	<5	<1	0.0113	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	<0.00026 U	<0.0001	<0.0001
	MW7-ROX-011812	1/18/2012		38.10	NE		<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	0.00025	<0.0001	<0.0001
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE		<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	0.00027	<0.00011	<0.00011
	MW7-ROX-050412	5/4/2012		39.19	NE		<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	0.00028	<0.0001	<0.0001
	MW7-ROX-080712	8/7/2012		39.50	NE		<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	0.00024	0.000037 J	0.000022 J
	MW7-ROX-103012	10/30/2012		41.23	NE		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2	0.00031	<0.00012	<0.00012
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2	0.00034	<0.00011	<0.00011
	MW7-ROX-011513	1/15/2013		42.21	NE		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4	0.00073	0.00011	0.000059 J
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE		<20		<20	<20	<4	<20	<20	<4	<20	<20	<4		<20	<20	<20	<4	<4	<4	0.00066	0.000093 J	<0.0001
	MW7-ROX-041013	4/10/2013		42.70	NE		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2	0.0012	0.00015	0.000089 J
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		<10	<10	<10	<2	<2	<2	0.0012	0.00016	0.00011
	MW7-ROX-071713	7/17/2013		39.60	NE		<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	0.00019	0.000031 J	0.000028 J
	MW7-ROX-101613	10/16/2013		40.64	NE		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2	0.00035	<0.00011	<0.00011
	MW7-ROX-013014	1/30/2014	42.92 - 52.92	42.94	NE		<13		<13	<13	<2.5	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5	0.00028	<0.0001	0.00029
MW-08	MW08-ROX-051311	5/13/2011	33.60 - 43.60	28.35	NE		<50		<50	<50	<10	0.0241 J	<50	<10	<50	<50	<10		<50	<50	<50	<10	<10	<10	0.00035 J	<0.00011 UJ	0.000063 J J
	MW08-ROX-051311D	5/13/2011		28.35	NE		<5		<5	<5	0.657 J	0.0288 J	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	0.00029 J	<0.00011 UJ	0.000054 J J
	MW8-ROX-072411	7/24/2011		26.02	NE		<25		<25	<25	<5	0.0237	<25	<5	<25	<25	<5		<25	<25	<25 UJ	<5	<5	<5	0.00029	<0.00011	0.000067 J
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE		<25		<25	<25	<5	0.023	<25	<5	<25	<25	<5		<25	<25	<25 UJ	<5	<5	<5	0.00027	<0.00011	0.000062 J
	MW-8-ROX-110211	11/2/2011		27.02	NE		<5		<5	<5	4.94 J	0.0282	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	<0.00023 U	<0.000095	<0.000095
	MW8-ROX-011812	1/18/2012		29.15	NE		<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	0.00038 J	<0.00053	<0.00053
	MW8-ROX-050412	5/4/2012		30.21	NE		<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	<0.00011	<0.00011	<0.00011
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE		<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	<0.0001	<0.0001	<0.0001
	MW8-ROX-080712	8/7/2012		30.97	NE		<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	0.00023	0.00013	0.000055 J
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE		<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	0.0002	0.00029	0.000071 J
	MW8-ROX-103012	10/30/2012		32.32	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	0.00026	0.00011	0.00044
	MW8-ROX-011513	1/15/2013		33.30	NE		<10		<10	<10	<2	<10	<10	2.09	<10	<10	<2		<10	<10	<10	<2	<2	<2	0.00017	0.000085 J	0.000029 J
	MW8-ROX-041013	4/10/2013		33.77	NE		<25		<25	<25	<5	<25	<25	<5	<25	<25	<5		<25	<25	<25	<5	<5	<5	0.00018	0.000059 J	0.000072 J
	MW8-ROX-071713	7/17/2013		30.43	NE		<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	0.0002	<0.0001	0.000049 J
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE		<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	0.00019	0.000056 J	0.000061 J
	MW8-ROX-101613	10/16/2013		31.59	NE		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2	0.00021	0.000089 J	<0.00011
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2	0.0002	0.000058 J	<0.00012
	MW8-ROX-013014	1/30/2014	33.60 - 43.60	34.02	NE		<13		<13	<13	1.92 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5	0.0002	0.000089 J	<0.0001
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE		<13		<13	<13	1.99 J	<13	<13	<2.5	<13	<13	<2.5		<13	<13	<13	<2.5	<2.5	<2.5	0.00021	0.000083 J	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																		Analytical Results		
MW-09	MW09-ROX-050611	5/6/2011	46.45 - 56.45	40.12	NE		<0.005 UJ		<0.005	<0.005	<0.001	<0.000097 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000097 UJ	<0.000097 UJ	<0.000097 UJ
	MW9-ROX-072311	7/23/2011		38.06	NE		<0.005		<0.005	<0.005	<0.001	0.001 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW9-ROX-110111	11/1/2011		37.78	NE		<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	<0.0001	<0.0001	<0.0001
	MW9-ROX-011612	1/16/2012		39.50	NE		<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	<0.00011	<0.00011	<0.00011
	MW9-ROX-050312	5/3/2012		41.03	NE		<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 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	<0.0001	<0.0001	<0.0001
	MW9-ROX-102912	10/29/2012		43.17	NE		<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	<0.0001	<0.0001	<0.0001
	MW9-ROX-011113	1/11/2013		43.90	NE		<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	0.000068 J	0.000064 J	0.00006 J
	MW9-ROX-040913	4/9/2013		44.67	NE		<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	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW9-ROX-070813	7/8/2013		42.35	NE		<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	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW9-ROX-011414	1/14/2014	46.45 - 56.45	44.47	NE		<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	<0.00011	<0.00011	<0.00011
MW-10	MW10-ROX-042811	4/28/2011	44.43 - 54.43	40.20	NE		<0.005		<0.005	<0.005	<0.001	<0.0048	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0048	<0.0048	<0.0048
	MW10-ROX-072311	7/23/2011		38.01	NE		<0.005		<0.005	<0.005	<0.001	0.00062 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW10-ROX-110111	11/1/2011		37.72	NE		<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	<0.0001	<0.0001	<0.0001
	MW10-ROX-011612	1/16/2012		39.28	NE		<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	<0.00011	<0.00011	0.000027 J
	MW10-ROX-050112	5/1/2012		40.86	NE		<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	<0.0001	<0.0001	0.000018 J
	MW10-ROX-072712	7/27/2012		41.21	NE		<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	<0.0001	<0.0001	<0.0001
	MW10-ROX-102612	10/26/2012		43.08	NE																				<0.00011	<0.00011	<0.00011
	MW10-ROX-121712	12/17/2012		43.08	NE		<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	<0.001	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	0.016	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW10-ROX-012113	1/21/2013		44.10	NE	<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		<0.0001	<0.0001	<0.0001
	MW10-ROX-040913	4/9/2013		44.60	NE		<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	<0.00011	<0.00011	<0.00011
	MW10-ROX-070813	7/8/2013		42.27	NE		<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	<0.00011	<0.00011	<0.00011
	MW10-ROX-100313	10/3/2013		42.38	NE		<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	<0.00011	<0.00011	<0.00011
	MW10-ROX-011514	1/15/2014	44.43 - 54.43	44.42	NE		<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	<0.00011	<0.00011	<0.00011
MW-11	MW11-ROX-050611	5/6/2011	41.66 - 51.66	37.60	NE		<0.005 UJ		<0.005	<0.005	<0.001	<0.000095 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095 UJ	<0.000095 UJ	<0.000095 UJ
	MW11-ROX-072411	7/24/2011		34.3	NE		<0.005		<0.005	<0.005	<0.001	0.00027 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW-11-ROX-110211	11/2/2011		35.44	NE		<0.005		<0.005	<0.005	0.003 J	<0.00011	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW11-ROX-011712	1/17/2012		37.44	NE		<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			0.000022 J J
	MW11-ROX-043012	4/30/2012		38.66	NE		<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	<0.0001	<0.0001	<0.0001
	MW11-ROX-072712	7/27/2012		38.90	NE		<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	<0.00012	<0.00012	<0.00012
	MW11-ROX-102512	10/25/2012		40.59	NE		<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	<0.00011	<0.00011	<0.00011
	MW11-ROX-011013	1/10/2013		41.43	NE		<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	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW11-ROX-040813	4/8/2013		42.02	NE		<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	<0.00011	<0.00011	<0.00011
	MW11-ROX-070813	7/8/2013		39.24	NE		<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	<0.00011	<0.00011	<0.00011
	MW11-ROX-100713	10/7/2013		39.95	NE		<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	<0.00011	<0.00011	<0.00011
	MW11-ROX-011514	1/15/2014	41.66 - 51.66	42.16	NE		<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	<0.00011	<0.00011	<0.00011

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
			Screening Values (mg/L)			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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			Analytical Results		
MW-12	MW12-ROX-051211	5/12/2011	41.92 - 51.92	37.58	NE		<0.005		<0.005	<0.005	<0.001	<0.0001 UJ	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW12-ROX-072411	7/24/2011		35.55	NE		<0.005		<0.005	<0.005	<0.001	0.00098 B	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	MW-12-ROX-110211	11/2/2011		35.70	NE		<0.005		<0.005	<0.005	<0.001	<0.000095	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095	<0.000095	<0.000095
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE		<0.005		<0.005	<0.005	<0.001	<0.000095	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095	<0.000095	<0.000095
	MW12-ROX-011712	1/17/2012		37.70	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-043012	4/30/2012		38.98	NE		<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	<0.0001	<0.0001	<0.0001
	MW12-ROX-072712	7/27/2012		39.22	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-102512	10/25/2012		40.95	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-011013	1/10/2013		41.83	NE		<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	<0.0001	<0.0001	<0.0001
	MW12-ROX-040813	4/8/2013		42.46	NE		<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	<0.0001	<0.0001	<0.0001
	MW12-ROX-070913	7/9/2013		39.28	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-100713	10/7/2013		40.22	NE		<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	<0.00011	<0.00011	<0.00011
	MW12-ROX-011514	1/15/2014	41.92 - 51.92	42.54	NE		<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	<0.0001	<0.0001	<0.0001
MW-13	MW13-ROX-051311	5/13/2011	25.57 - 35.57	23.65	NE		<0.005		<0.005	<0.005	0.0061 J	<0.000095 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.000099 UJ	0.000067 J J	0.000059 J J
	MW13-ROX-080311	8/3/2011		21.67	NE		<0.005		<0.005	<0.005	0.004	<0.000045 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	0.00011
	MW13-ROX-110311	11/3/2011		22.85	NE		<0.005		<0.005	<0.005	0.0156 J	0.00017	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.00011	<0.00011	<0.00011
	MW13-ROX-012012	1/20/2012		24.77	NE		<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	<0.00011	0.00014	<0.00011
	MW13-ROX-050712	5/7/2012		25.79	NE		<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	<0.0001	<0.0001	<0.0001
	MW13-ROX-080812	8/8/2012		26.67	NE		<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	0.0001 J	0.00019	0.000063 J
	MW13-ROX-110812	11/8/2012		25.30	NE		<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	<0.0001	<0.0001	<0.0001
	MW13-ROX-012313	1/23/2013		29.26	NE		<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	<0.00011	<0.00011	<0.00011
	MW13-ROX-041213	4/12/2013		29.44	NE		<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	<0.0001	<0.0001	<0.0001
	MW13-ROX-071213	7/12/2013		25.67	NE		<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	<0.00011	<0.000063 U	<0.000058 U
	MW13-ROX-100913	10/9/2013		26.94	NE		<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	0.000098 J	0.000071 J	<0.0001
	MW13-ROX-012914	1/29/2014	25.57 - 35.57	29.63	NE		<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	<0.00011	<0.00011	<0.00011
MW-14	MW14-ROX-110911	11/9/2011	Unknown				<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	<0.00011	<0.00011 UJ	<0.00011
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE		<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	0.00046	<0.0001	<0.0001
	MW14-ROX-080312	8/3/2012		29.87	NE		<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	0.00095	0.00015	<0.00011
	MW14-ROX-103112	10/31/2012		32.02	NE		<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	0.00074	0.00008 J	<0.0001
	MW14-ROX-011813	1/18/2013		33.05	NE		<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	0.00092	0.00013	<0.0001
	MW14-ROX-041113	4/11/2013		33.31	NE		<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	0.00068	0.000098 J	<0.00011
	MW14-ROX-071213	7/12/2013		30.36	NE		<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	0.00046 B	<0.000062 U	<0.00011
	MW14-ROX-101013	10/10/2013		30.80	NE		<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	0.00065	0.00011	<0.00011
	MW14-ROX-012914	1/29/2014	33.42 - 43.42	33.67	NE		<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	0.00062	0.00012	<0.00011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
			Screening Values (mg/L)			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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		**Analytical Results**		
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE		<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	<0.00011	<0.00011	<0.00011
	MW16-ROX-040813	4/8/2013		43.39	NE		<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	<0.0001	<0.0001	<0.0001
	MW16-ROX-070813	7/8/2013		40.62	NE		<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	<0.00011	<0.00011	<0.00011
	MW16-ROX-100813	10/8/2013		41.62	NE		<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	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	MW16-ROX-011514	1/15/2014	37.06 - 47.06	43.39	NE		<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	<0.0001	<0.0001	<0.0001
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE		<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	0.00018	<0.0001	0.00002 J
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE		<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	0.00018	<0.00011	<0.00011
	MW22-ROX-040513	4/5/2013		42.23	NE		<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	0.00018	0.000049 J J	<0.00011
	MW22-ROX-071113	7/11/2013		39.35	NE		<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	0.00026	0.00048	0.000035 J
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE		<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	0.00018	0.00047	<0.00011
	MW22-ROX-100913	10/9/2013		40.39	NE		<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	0.00019	<0.00011	<0.00011
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE		<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	0.00018	<0.00011	<0.00011
	MW22-ROX-012014	1/20/2014	37.88 - 47.88	42.49	NE		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	0.00015	<0.00011	<0.00011
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE		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	0.00014	<0.00011	<0.00011
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE		<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	<0.0001	<0.0001 UJ	<0.0001
	MW24-ROX-071113	7/11/2013		40.35	NE		<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	0.000024 J	<0.00011	<0.00011
	MW24-ROX-100913	10/9/2013		41.27	NE		<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	<0.00011	<0.00011	<0.00011
	MW24-ROX-011514	1/15/2014	38.89 - 48.89	43.05	NE		<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	<0.00011	<0.00011	<0.00011
P-54	P54-ROX-051111	5/11/2011	38.00 - 63.00	37.37	NE		<0.005		<0.005	<0.005	<0.001	0.00013 J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.00011 UJ	<0.00011 UJ	<0.00011 UJ
	P54-ROX-072411	7/24/2011		35.38	NE		<0.005		<0.005	<0.005	<0.001	0.000066 JB	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	P54-ROX-110311	11/3/2011		35.49	NE		<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	<0.0001	<0.0001	<0.0001
	P54-ROX-011712	1/17/2012		37.17	NE		<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	<0.0001	<0.0001	<0.0001
	P54-ROX-050412	5/4/2012		38.77	NE		<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	<0.0001	<0.0001	<0.0001
	P54-ROX-080212	8/2/2012		38.95	NE		<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	<0.00011	<0.00011	<0.00011
	P54-ROX-103012	10/30/2012		40.70	NE		<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	<0.0001	<0.0001	<0.0001
	P54-ROX-011113	1/11/2013		41.56	NE		<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	<0.00011	<0.00011	<0.00011
	P54-ROX-041013	4/10/2013		41.80	NE		<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	<0.00011	<0.00011	<0.00011
	P54-ROX-050313	5/3/2013		41.80	NE		<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	<0.00011	<0.00011	<0.00011
	P54-ROX-071113	7/11/2013		39.07	NE		<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	0.000032 J	0.000016 J	0.000018 J
	P54-ROX-100813	10/8/2013		39.94	NE		<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	<0.00011	<0.00011	<0.00011
	P54-ROX-011514	1/15/2014	38.00 - 63.00	42.20	NE		<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	<0.00011	<0.00011	<0.00011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
			Screening Values (mg/L)			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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			**Analytical Results**		
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE		<0.005		<0.005	<0.005	0.0012	0.0015	<0.005	0.029	<0.005	<0.005	<0.001		0.0067	0.0056	<0.005	0.0466	0.0163	0.0629	<0.0001	<0.0001	<0.0001
	P55-ROX-011912	1/19/2012		41.09	NE		<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	0.00017	<0.0001	<0.0001
	P55-ROX-011912-D	1/19/2012		41.09	NE		<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	0.00015	<0.00011	<0.00011
	P55-ROX-050912	5/9/2012		42.44	NE		<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	0.00036	0.000095 J	<0.0001
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	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		0.00069	0.00019	<0.0001
	P55-ROX-012113	1/21/2013		43.60	NE		<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	0.00054	0.00014	<0.0001
	P55-ROX-041513	4/15/2013		43.63	NE		<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	0.00073	0.00021	<0.0001
	P55-ROX-071613	7/16/2013		40.06	NE		<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	0.00066	0.0002	<0.00011
	P55-ROX-101013	10/10/2013		41.67	NE		<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	0.00071	0.00019	<0.00011
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE		<0.005		0.0512	<0.005	<0.001	0.067	0.0463	0.0422	<0.005	<0.005	<0.001		0.0962	0.0226	<0.005	0.476	0.0332	0.509	0.0007	0.00013	0.00013
	P56-ROX-011912	1/19/2012		41.81	NE		<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	0.00064	<0.0001	0.00011
	P56-ROX-050812	5/8/2012		43.09	NE		<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	0.00057	0.0001	<0.0001
	P56-ROX-080612	8/6/2012		43.60	NE		<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	0.00058	0.000087 J	0.00013
	P56-ROX-103112	10/31/2012		44.80	NE		<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	0.0011	<0.0001	0.00012
	P56-ROX-011713	1/17/2013		45.65	NE		<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	0.00039	0.000083 J	0.0001
	P56-ROX-041213	4/12/2013		46.12	NE		<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	0.00053	0.000088 J	0.0001 J
	P56-ROX-071513	7/15/2013		43.25	NE		<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	0.00065	0.00013	0.00014
	P56-ROX-101013	10/10/2013		44.48	NE		<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	0.0006	0.000092 J	0.00011
	P56-ROX-012214	1/22/2014	40.82 - 65.82	46.35	NE		<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	0.00055	<0.0001	0.00013
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE		<0.5		<0.5	<0.5	0.221	0.152	<0.5	<0.1	<0.5	<0.5	<0.1		0.615	<0.5	<0.5	1.02	<0.1	1.02	0.00055	<0.00054	<0.00054
	P57-ROX-021312	2/13/2012		42.13	NE		<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	0.00056	<0.0001	<0.0001
	P57-ROX-050712	5/7/2012		42.92	NE		<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	0.00033	<0.0001	<0.0001
	P57-ROX-080612	8/6/2012		43.53	NE		<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	0.00056	0.0001	0.000073 J
	P57-ROX-080612-DUP	8/6/2012		43.53	NE		<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	0.00051	0.0001	0.000064 J
	P57-ROX-110512	11/5/2012		44.98	NE		<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	0.00053	<0.0001	0.000061 J
	P57-ROX-012913	1/29/2013		45.92	NE		<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	0.00061	0.00013	0.000076 J
	P57-ROX-041113	4/11/2013		46.29	NE		<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	0.00063	0.00012	0.000073 J
	P57-ROX-071613	7/16/2013		43.38	NE		<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	0.00047	0.0001 J	0.000077 J
	P57-ROX-101413	10/14/2013		44.38	NE		<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	0.00045	0.000071 J	<0.00011
	P57-ROX-020314	2/3/2014	40.46 - 65.46	46.57	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	0.00041	0.000075 J	<0.00011

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						VOCs													VOCs						SVOCs		
						Hexane [6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane [6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene [1]	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene [6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
			Screening Values (mg/L)			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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																			Analytical Results		
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE		<0.005		0.0734	<0.005	<0.001	0.204	0.0862	0.13	<0.005	<0.005	<0.001		<25	0.104	<0.005	0.575	0.101	0.677	0.0011	<0.000097	<0.000097
	P58-ROX-011912	1/19/2012		39.73	NE		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	0.001	<0.00011	<0.00011
	P58-ROX-011912-D	1/19/2012		39.73	NE		<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	0.00092	<0.00011	<0.00011
	P58-ROX-050712	5/7/2012		40.90	NE		<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	0.00059	0.00019	0.00057 J
	P58-ROX-050712-DUP	5/7/2012		40.90	NE		<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	0.00044	0.00015	<0.0001 UJ
	P58-ROX-080612	8/6/2012		41.63	NE		<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	0.00086	0.00029	0.000094 J
	P58-ROX-080612-DUP	8/6/2012		41.63	NE		<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	0.00098	0.0003	0.00011
	P58-ROX-110612	11/6/2012		43.09	NE		<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																				0.00093	0.00024	0.00083
	P58-ROX-012213	1/22/2013		44.21	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	0.728 J	0.0011	0.0006	<0.00011
	P58-ROX-041113	4/11/2013		44.40	NE		<10		<10	<10	<2	<10	<10	<2	<10	<10	<2		0.926 J	<10	<10	<2	<2	<2	0.0015	0.0005	<0.00011
	P58-ROX-071613	7/16/2013		41.49	NE		<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	0.00076	0.00027	0.000096 J
	P58-ROX-101413	10/14/2013		42.19	NE		<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	0.00084	<0.00011	<0.00011
	P58-ROX-020314	2/3/2014	40.21 - 65.21	44.66	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	0.00061	0.00018	<0.0001
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE		<0.25		<0.25	<0.25	<0.05	0.0793	<0.25	0.321	<0.25	<0.25	<0.05		0.477	<0.25	<0.25	3.11	0.312	3.42	0.00077	0.00012	0.00046
	P59-ROX-011912	1/19/2012		42.88	NE		<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	0.00036	<0.00011	0.00025
	P59-ROX-011912-DUP	1/19/2012		42.88	NE		<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	0.00037	<0.0001	0.00015
	P59-ROX-050912	5/9/2012		44.11	NE		<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	0.00022	<0.0001	0.000095 J
	P59-ROX-080212	8/2/2012		44.07	NE		<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	0.00042	0.0001 J	0.00014
	P59-ROX-110212	11/2/2012		45.98	NE		<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	0.00043	<0.00011	0.000086 J
	P59-ROX-110212-DUP	11/2/2012		45.98	NE		<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	0.00042	<0.0001	0.000084 J
	P59-ROX-013013	1/30/2013		46.60	NE		<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	0.00047	<0.0001	0.00012
	P59-ROX-041213	4/12/2013		46.95	NE		<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	0.00057	0.00013	<0.00011
	P59-ROX-041213-DUP	4/12/2013		46.95	NE		<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	0.00058	0.00012	<0.00011
	P59-ROX-071613	7/16/2013		44.13	NE		<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	0.00035	0.000071 J	0.000092 J
	P59-ROX-101013	10/10/2013		45.50	NE		<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	0.00055	0.000084 J	0.00021
	P59-ROX-020314	2/3/2014	47.91 - 72.91	47.35	NE		<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	0.00046	<0.0001	0.00018
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE		<0.005		0.158	<0.005	0.0845 J	0.0091	0.188	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	0.0018	<0.0001	<0.0001
	P66-ROX-051012	5/10/2012		32.48	NE		<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	0.00078	<0.0001	<0.0001
	P66-ROX-080312	8/3/2012		30.51	NE		<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	0.00073	0.00025	<0.00011
	P66-ROX-103112	10/31/2012		34.75	NE		<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	0.00078	0.00022	0.0006
	P66-ROX-011813	1/18/2013		35.70	NE		<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	0.00074	0.00034	<0.000055 U
	P66-ROX-041113	4/11/2013		36.03	NE		<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	0.0011	0.00028	<0.00011
	P66-ROX-071213	7/12/2013		33.20	NE		<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	0.00087	<0.00011	<0.0002 U
	P66-ROX-101013	10/10/2013		33.66	NE		<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	0.00066	0.0002	<0.00011
	P66-ROX-110713	11/7/2013		33.66	NE		<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	34.72 - 59.72	36.39	NE		<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	0.00099	0.00032	<0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
				Screening Values (mg/L)		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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	Analytical Results (mg/L)																				Analytical Results
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE		<0.005		0.0123	<0.005	0.0222	0.0673	0.0222	0.669	<0.005	<0.005	<0.001		0.587	0.162	<0.005	0.177	<0.1	0.177	0.00033	0.00012	<0.0001
	P74-ROX-011912	1/19/2012		38.77	NE		<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	<0.000095	<0.000095	<0.000095
	P74-ROX-050712	5/7/2012		39.92	NE		<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	<0.0001	<0.0001	<0.0001
	P74-ROX-080612	8/6/2012		40.71	NE		<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	0.00016	0.000056 J	0.000041 J
	P74-ROX-110112	11/1/2012		41.72	NE		<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	0.00023	<0.0001	0.000044 J
	P74-ROX-011713	1/17/2013		42.65	NE		<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	0.00019	0.0001	0.000063 J
	P74-ROX-041113	4/11/2013		42.83	NE		<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	<0.0001	<0.0001	<0.0001
	P74-ROX-071513	7/15/2013		40.11	NE		<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	<0.000063 U	<0.00011	0.000032 J
	P74-ROX-101413	10/14/2013		41.72	NE		<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	0.0002	<0.00011	<0.00011
	P74-ROX-012414	1/24/2014	44.43 - 69.43	43.28	NE		<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	0.00023	<0.0001	<0.0001
P-93A	P93A-ROX-050511	5/5/2011	48.17 - 63.17	41.88	NE		<0.005 UJ		0.0206 J	<0.005	0.0684 J	0.0795 J	0.0228 J	0.0718 J	<0.005	<0.005	<0.001		0.169 J	0.0293 J	<0.005	0.628 J	0.0707 J	0.699 J	0.00026 J	<0.0001 UJ	0.000035 J J
	P93A-ROX-081811	8/18/2011		39.40	NE		<0.005		0.0236 J	<0.005	0.0356	0.0868	0.0254	0.0678	<0.005	<0.005	<0.001		0.237	0.0495	<0.005 UJ	0.745	0.09	0.835	0.00036	<0.0001	0.000058 J
	P93A-ROX-102611	10/26/2011		39.43	NE		<0.005		0.0189	<0.005	0.0405	0.108	0.0172	0.0438	<0.005 UJ	<0.005	<0.001		0.171	0.0399	<0.005	0.482	0.0614	0.543	0.00024	<0.0001	<0.0001
	P93A-ROX-012012	1/20/2012		41.66	NE		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	0.00014	<0.000095	0.000032 J
	P93A-ROX-050812	5/8/2012		42.75	NE		<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	<0.0001	<0.0001	<0.0001
	P93A-ROX-080912	8/9/2012		43.66	NE		<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	0.00015	<0.00011	0.000048 J
	P93A-ROX-110712	11/7/2012		45.00	NE		<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	<0.00022 U	<0.0001	<0.0001
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE		<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	0.00029 B	<0.0001	0.000061 J
	P93A-ROX-012313	1/23/2013		45.89	NE		<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	0.00016	<0.0001	0.000028 J
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE		<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	0.00014	<0.0001	<0.0001
	P93A-ROX-041113	4/11/2013		46.29	NE		<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	0.00023	<0.0001	0.000074 J
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE		<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	0.00021	<0.0001	<0.0001
	P93A-ROX-071813	7/18/2013		43.25	NE		<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	<0.00011	0.000032 J	0.00003 J
	P93A-ROX-101113	10/11/2013		44.18	NE		<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	0.00017	<0.0001	<0.0001
	P93A-ROX-012914	1/29/2014	48.17 - 63.17	46.53	NE		<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	0.00022	<0.00011	<0.00011
P-93B	P93B-ROX-050511	5/5/2011	74.60 - 76.60	41.96	NE		<0.005 UJ		0.0142	<0.005	0.0113	0.0013 J	0.0151	0.0488	<0.005	<0.005	<0.001		0.0057	0.0014 J	<0.005	0.0502	0.0112	0.0614	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	P93B-ROX-081811	8/18/2011		39.44	NE		<5		<5	<5	<1	0.0037	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	<0.0001	<0.0001	<0.0001
	P93B-ROX-102611	10/26/2011		39.48	NE		<0.005		0.0292	<0.005	<0.001	0.012	0.0359	0.0859	<0.005 UJ	<0.005	<0.001		0.0303	0.0082	<0.005	0.167	0.0352	0.202	<0.0001	<0.0001	<0.0001
	P93B-ROX-012012	1/20/2012		41.72	NE		<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	<0.000095	0.000028 J	<0.000095
	P93B-ROX-050812	5/8/2012		42.79	NE		<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	<0.0001	<0.0001	<0.0001
	P93B-ROX-080912	8/9/2012		43.69	NE		<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	<0.00011	0.000087 J	<0.00011
	P93B-ROX-110712	11/7/2012		44.98	NE		<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	<0.0001	0.000073 JB	<0.0001
	P93B-ROX-110712-DUP	11/7/2012		44.98	NE		<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	<0.000047 U	0.000058 J	<0.0001
	P93B-ROX-012313	1/23/2013		45.89	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5 UJ	<1	<1	<1	0.00014	0.000072 J	0.00013
	P93B-ROX-041113	4/11/2013		46.32	NE		<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	<0.0001	<0.0001	<0.0001
	P93B-ROX-071813	7/18/2013		43.30	NE		<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	<0.00011	<0.00011	<0.00011
	P93B-ROX-101613	10/16/2013		44.43	NE		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2	<0.0001	0.000065 J	<0.0001
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE		<10		<10	<10	<2 UJ	<10	<10	<2	<10	<10	<2		<10	<10	<10 UJ	<2	<2	<2	<0.0001	0.000091 J	<0.0001
	P93B-ROX-012814	1/28/2014	74.60 - 76.60	46.58	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	<0.00011	<0.00011	<0.00011
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE		<5		<5	<5	<1	<5	<5	<1	<5	<5	<1		<5	<5	<5	<1	<1	<1	<0.0001	<0.0001	<0.0001

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs													VOCs						SVOCs		
						Hexane [6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane [6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene [4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene [6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
Screening Values (mg/L)						**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]	**0.42** [1]	**0.21** [3]	**2.1** [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																			**Analytical Results**		
P-93C	P93C-ROX-050611	5/6/2011	94.26 - 96.26	41.84	NE		<0.005 UJ		<0.005	<0.005	0.0052	0.00003 J J	<0.005	0.0018	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	0.00059 J	<0.0001 UJ	0.000041 J J	<0.0001 UJ
	P93C-ROX-081811	8/18/2011		39.32	NE		<0.005		<0.005	<0.005	0.0067	<0.000054 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	P93C-ROX-102611	10/26/2011		39.36	NE		<0.005		<0.005	<0.005	0.0096	<0.0001	<0.005	<0.001	<0.005 UJ	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	P93C-ROX-012012	1/20/2012		41.57	NE		<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	<0.0001	<0.0001	<0.0001
	P93C-ROX-050812	5/8/2012		42.68	NE		<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	<0.00011	<0.00011	<0.00011
	P93C-ROX-080912	8/9/2012		43.57	NE		<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	0.000089 J	0.000022 J	<0.0001
	P93C-ROX-110812	11/8/2012		45.12	NE		<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	<0.0001	<0.0001	<0.0001
	P93C-ROX-012313	1/23/2013		45.78	NE		<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	<0.00011	<0.00011	<0.00011
	P93C-ROX-041213	4/12/2013		46.21	NE		<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	<0.0001	<0.0001	<0.0001
	P93C-ROX-071813	7/18/2013		43.31	NE		<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	<0.000045 U	<0.00011	0.000021 J
	P93C-ROX-080813	8/8/2013		43.31	NE		<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		<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	<0.0001	<0.0001	<0.0001
	P93C-ROX-012414	1/24/2014	94.26 - 96.26	46.44	NE		<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	<0.0001	<0.0001	<0.0001
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE		<0.005 UJ		<0.005	<0.005	0.0014	0.000036 J J	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.0001 UJ	<0.0001 UJ	<0.0001 UJ
	P93D-ROX-081811	8/18/2011		39.46	NE		<0.005		<0.005	<0.005	0.00095 J	<0.000087 U	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005 UJ	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
	P93D-ROX-102711	10/27/2011		39.59	NE		<0.005		<0.005	<0.005	0.004 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	<0.0001	<0.0001	<0.0001
	P93D-ROX-012012	1/20/2012		41.77	NE		<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	<0.00011	<0.00011	<0.00011
	P93D-ROX-050812	5/8/2012		42.96	NE		<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	<0.0001	<0.0001	<0.0001
	P93D-ROX-080812	8/8/2012		43.71	NE		<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	0.00017	0.000051 J	<0.0001
	P93D-ROX-110812	11/8/2012		NM	NE		<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	<0.00011	<0.00011	<0.00011
	P93D-ROX-012213	1/22/2013		44.21	NE		<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	<0.00011	<0.00011	<0.00011
	P93D-ROX-041113	4/11/2013		46.37	NE		<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	<0.0001	<0.0001	<0.0001
	P93D-ROX-071213	7/12/2013		43.51	NE		<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	<0.000026 U	<0.00011	<0.00011
	P93D-ROX-101113	10/11/2013		44.24	NE		<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	<0.0001	<0.0001	<0.0001
	P93D-ROX-013114	1/31/2014	125.75 - 127.75	46.62	NE		<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	<0.00011	<0.00011	<0.00011
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE		<0.005		<0.005	<0.005	0.0036 J	<0.000095	<0.005	<0.001	<0.005	<0.005	<0.001		<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.000095	<0.000095	<0.000095
	P114-ROX-012012	1/20/2012		27.17	NE		<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	<0.0001	<0.0001	<0.0001
	P114-ROX-050912	5/9/2012		28.09	NE		<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	<0.0001	<0.0001	<0.0001
	P114-ROX-080912	8/9/2012		29.13	NE		<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	<0.0001	0.000029 J	<0.0001
	P114-ROX-110912	11/9/2012		30.90	NE		<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	<0.0001	<0.0001	<0.0001
	P114-ROX-012313	1/23/2013		30.22	NE		<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	<0.00011	<0.00011	<0.00011
	P114-ROX-041513	4/15/2013		31.80	NE		<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	<0.0001	<0.0001	<0.0001
	P114-ROX-071813	7/18/2013		27.22	NE		<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	0.00013 B	<0.00011	0.00011
	P114-ROX-071813-DUP	7/18/2013		27.22	NE		<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	<0.00011	<0.00011	0.00013
	P114-ROX-101713	10/17/2013		29.43	NE		<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	<0.00011	<0.00011	<0.00011
	P114-ROX-012814	1/28/2014	32.67 - 52.67	32.11	NE		<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	<0.00011	<0.00011	0.00011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						VOCs												VOCs						SVOCs		
						Hexane[6]	2-Hexanone (Methyl N-Butyl Ketone)	Isopentane[6]	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene[4]	n-Propylbenzene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,2-Trichloroethane	1,2,3-Trimethylbenzene[6]	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl acetate	m,p-Xylenes	o-Xylenes	Xylenes (total)	Acenaphthene	Acenaphthylene	Anthracene
Screening Values (mg/L)						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]	0.42 [1]	0.21 [3]	2.1 [1]
Location	**Sample ID**	**Sample Date**	**Screened Interval (ft btoc)**	**Depth to Water (ft btoc)**	**Product Thickness (ft)**	**Analytical Results (mg/L)**																		**Analytical Results**		
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE		<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	0.000023 J	<0.0001	<0.0001
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE		<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	<0.00011	<0.00011	<0.00011
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE		<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	<0.00011	<0.00011	<0.00011
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE		<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	0.00025	0.000059 J	0.000074 J
	ROST3MW-ROX-040513	4/5/2013					<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	0.00016	<0.00011 UJ	<0.00011
	ROST3MW-ROX-071113	7/11/2013		39.50	NE		<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	0.00029		0.000091 J
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE		<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	0.0001 J	<0.00011	<0.00011
	ROST3MW-ROX-011714	1/17/2014	37.81 - 47.81	42.20	NE		<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	<0.00011	<0.00011	<0.00011
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE		<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	0.00027	0.000072 J	0.00011
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE		<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	0.00039 B	<0.00011	<0.00018 U
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE		<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	0.000054 J	<0.0001	0.00005 J
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE		<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	<0.00011	<0.00011	<0.00011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE		<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	0.000066 J	0.000018 J	0.000033 J
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE		<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	0.00019	0.000073 J	0.00012
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE		<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	0.00012	<0.00011	<0.00011
	ROST4PZC-ROX-011714	1/17/2014	34.95 - 44.95	40.97	NE		<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	<0.00012	<0.00012	<0.00012
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE		<0.05		<0.05	<0.05	<0.01	0.105	<0.05	0.233	<0.05	<0.05	<0.01		0.358	0.0527	<0.05	1.13	0.108	1.24	0.00079	0.00012	0.00017
	T12-ROX-011912	1/19/2012		41.0	NE		<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	0.00047	<0.00011	0.00014
	T12-ROX-050912	5/9/2012		42.62	NE		<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	0.00032	<0.0001	0.000081 J
	T12-ROX-080212	8/2/2012		41.92	NE		<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	0.00044	0.000082 J	0.0001 J
	T12-ROX-110512	11/5/2012		43.91	NE		<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	0.00044	<0.0001	0.0001
	T12-ROX-011813	1/18/2013		44.50	NE		<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	0.0005	0.000093 J	<0.00013 U
	T12-ROX-041513	4/15/2013		44.99	NE		<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	0.00063	0.00009 J	<0.0001
	T12-ROX-071613	7/16/2013		42.33	NE		<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	0.00055	0.0001 J	0.00015
	T12-ROX-101513	10/15/2013		43.73	NE		<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	0.00036	<0.00011	0.00012
	T12-ROX-012414	1/24/2014	46.46 - 72.46	45.26	NE		<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	0.0005	<0.0001	0.00014

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-01	MW1-ROX-042911	4/29/2011	43.41 - 58.41	38.37	NE	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.013 UJ	<0.013	<0.0063	<0.00077 U	<0.0063	<0.013	<0.0063	<0.0063	<0.0063	<0.013	<0.0063	<0.013	<0.0063	<0.00085 U	<0.0063	<0.013
	MW1-ROX-072711	7/27/2011		35.77	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW1-ROX-120511	12/5/2011		37.10	NE	<0.000051	<0.0001	<0.000056 U	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	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	0.00011	<0.00011 U	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW1-ROX-050112	5/1/2012		39.09	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.00054 U	<0.0051	<0.01
	MW1-ROX-073012	7/30/2012		39.39	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	0.00032 J	<0.011	<0.0053	<0.00043 U	<0.0053	<0.011
	MW1-ROX-102612	10/26/2012		41.22	NE	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	0.00099 J	<0.0057	<0.011	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057	<0.0057	<0.0057	<0.011
	MW1-ROX-121712	12/17/2012		41.22	NE																					
	MW1-ROX-011013	1/10/2013		41.89	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01
	MW1-ROX-040913	4/9/2013		42.55	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0011 U	<0.011	<0.0053 UJ	<0.0012 U	<0.0053	<0.011
	MW1-ROX-070813	7/8/2013		39.56	NE	<0.000051	<0.0001	0.000027 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.0024 U	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW1-ROX-100313	10/3/2013		40.28	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00065 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW1-ROX-011414	1/14/2014	48.80 - 58.80	42.77	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011
MW-02	MW02-ROX-051011	5/10/2011	47.19 - 62.19	39.14	NE	<0.000052 UJ	<0.0001 UJ	<0.000052 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	0.0019 J	<0.0052	<0.0029 U	<0.0052 UJ	<0.01	<0.0001 UJ	<0.0001 UJ	<0.0052	<0.01	0.0016 J J	<0.01	<0.0052 UJ	<0.001 U	<0.0052	<0.01
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW2-ROX-011612	1/16/2012		38.89	NE	<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	<0.00011	<0.000047 U	<0.0053	<0.011	<0.0053	0.0035 J	<0.0053	0.00056 J	<0.0053	<0.011
	MW2-ROX-050112	5/1/2012		40.25	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	0.0055 J	<0.0052	<0.0005 U	<0.0052	<0.01
	MW2-ROX-073012	7/30/2012		40.60	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00059 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	0.00036 J	0.0045 J	<0.0053	<0.00047 U	<0.0053	<0.011
	MW2-ROX-102612	10/26/2012		42.35	NE	0.00016	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0034 J	<0.0054	<0.0054	<0.0054	<0.011
	MW2-ROX-011113	1/11/2013		42.94	NE	<0.000056	0.000027 J	0.000039 J	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011
	MW2-ROX-040913	4/9/2013		43.70	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.005 J	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW2-ROX-071113	7/11/2013		40.82	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.00063 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	0.005 J	<0.0055	<0.0055	<0.0055	<0.011
	MW2-ROX-100813	10/8/2013		41.73	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW2-ROX-012014	1/20/2014	49.87 - 59.87	44.00	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
MW-03	MW03-ROX-051011	5/10/2011	30.98 - 45.98	24.79	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.0025 U	0.0064 J	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ	<0.0014 U	<0.005	<0.01
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095 UJ	<0.0095	<0.0048	0.0084	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.00061 U	<0.0048	<0.0095
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW3-ROX-112911-DUP	11/29/2011		24.06	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW3-ROX-011612	1/16/2012		24.93	NE	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	0.000098 J	<0.00013 U	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW3-ROX-043012	4/30/2012		26.19	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.00047 U	<0.0052	<0.01
	MW3-ROX-072712	7/27/2012		26.60	NE	<0.000053	<0.00011	<0.000053	<0.00011 UJ	<0.00011	<0.011	<0.011	<0.0053	<0.00067 U	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.00066 U	<0.0053	<0.011
	MW3-ROX-102512	10/25/2012		28.39	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.00059 U	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW3-ROX-010913	1/9/2013		29.35	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.0025 J	<0.005	<0.01
	MW3-ROX-040813	4/8/2013		29.74	NE	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057	<0.0057	<0.0057	<0.011
	MW3-ROX-071113	7/11/2013		26.32	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0038	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW3-ROX-100813	10/8/2013		27.38	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW3-ROX-011614	1/16/2014	34.67 - 44.67	29.91	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-04	MW04-ROX-051111	5/11/2011	42.63 - 57.63	36.19	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.0023 U	0.0063 J	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ	<0.0012 U	<0.005	<0.01
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0102	<0.01	<0.005	<0.0057 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0103	<0.01	<0.005	<0.002 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.000052	0.00012	<0.000087 U	<0.00063 U	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0028 U	<0.0052	<0.01	<0.0001	<0.00035 U	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	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	0.00014	<0.00019 U	<0.0052	<0.01	<0.0052	<0.01	<0.0052	0.00077 J	<0.0052	<0.01
	MW4-ROX-050312	5/3/2012		37.45	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.00062 U	<0.005	<0.01
	MW4-ROX-050312-DUP	5/3/2012		37.45	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.00061 U	<0.0051	<0.01
	MW4-ROX-072512	7/25/2012		37.63	NE	<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	<0.0001	<0.0001	<0.002	<0.01	0.0014 J	<0.01	<0.0051	0.00075 J	<0.0051	<0.01
	MW4-ROX-072512-Dup	7/25/2012		37.63	NE	<0.000051	<0.0001	<0.000046 U	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.00069 U	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	0.0012 J	<0.01	<0.0051	0.00057 J	<0.0051	<0.01
	MW4-ROX-102912	10/29/2012		39.45	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW4-ROX-011113	1/11/2013		40.20	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011
	MW4-ROX-011113-DUP	1/11/2013		40.20	NE	<0.00006	<0.00012	<0.00006	<0.00012	<0.00012	<0.012	<0.012	<0.006	<0.0024	<0.006	<0.012	<0.00012	<0.00012	<0.0024	<0.012	<0.006	<0.012	<0.006 UJ	<0.006	<0.006	<0.012
	MW4-ROX-030413	3/4/2013		40.20	NE																					
	MW4-ROX-040913	4/9/2013		40.90	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	MW4-ROX-040913-DUP	4/9/2013		40.90	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	<0.0053 UJ	<0.00062 U	<0.0053	<0.011
	MW4-ROX-071713	7/17/2013		37.61	NE	<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	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW4-ROX-101613	10/16/2013		38.80	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011
	MW4-ROX-013014	1/30/2014	46.06 - 56.06	41.09	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054	<0.0013 U	<0.0054	<0.011
MW-05	MW05-ROX-051211	5/12/2011	31.13 - 46.13	23.98	NE	<0.000053 UJ	<0.00011 UJ	<0.000053 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.0009 U	<0.0053	<0.011
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00079 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	0.00052 J	<0.0053	<0.011
	MW5-ROX-011712	1/17/2012		24.76	NE	<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	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW5-ROX-050312	5/3/2012		25.89	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0005 U	<0.0051	<0.01
	MW5-ROX-072512	7/25/2012		26.18	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00064 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	0.0011 J	<0.01	<0.0052	0.00057 J	<0.0052	<0.01
	MW5-ROX-102912	10/29/2012		28.16	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW5-ROX-011113	1/11/2013		28.75	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011
	MW5-ROX-040913	4/9/2013		29.41	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW5-ROX-070913	7/9/2013		26.04	NE	0.0001 J	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW5-ROX-100813	10/8/2013		26.97	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW5-ROX-011714	1/17/2014	33.97 - 43.97	29.59	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-06A	MW6A-ROX-051611	5/16/2011	31.98 - 46.98	26.10	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	0.0026	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00083 U	<0.01	<0.005	<0.0016 U	<0.005	<0.01
	MW6A-ROX-072611	7/26/2011		23.76	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002 U	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW6A-ROX-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.0023	0.00077 J	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	0.00053 J	0.00093 J	<0.01
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	0.0011 J	0.00054 J	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	0.00069 J	<0.0051	<0.01
	MW6A-ROX-011712	1/17/2012		26.74	NE	<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	<0.00011	<0.00014 U	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW6A-ROX-050212	5/2/2012		27.77	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0029 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW6A-ROX-080112	8/1/2012		28.36	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.00049 J	<0.005	<0.01
	MW6A-ROX-102412	10/24/2012		30.06	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW6A-ROX-011413	1/14/2013		31.00	NE	<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	<0.0001	0.000066 J	<0.002	<0.01	<0.0051	<0.01	<0.0051 UJ	<0.0051	<0.0051	<0.01
	MW6A-ROX-040313	4/3/2013		31.62	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	0.00052 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	0.0018 J	<0.0053	<0.011
	MW6A-ROX-070913	7/9/2013		28.25	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW6A-ROX-070913-DUP	7/9/2013		28.25	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW6A-ROX-100713	10/7/2013		28.87	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.00082 U	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011
	MW6A-ROX-100713-DUP	10/7/2013		28.87	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.00078 J	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW6A-ROX-011614	1/16/2014	34.83 - 44.83	31.62	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW6A-ROX-011614-DUP	1/16/2014		31.62	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
MW-06B	MW6B-ROX-051611	5/16/2011	64.05 - 69.05	25.95	NE	<0.000048 UJ	<0.000095 UJ	<0.000048 UJ	<0.000095 UJ	<0.000095 UJ	<0.0095	<0.0095	<0.0048	0.0023	<0.0048	<0.0095	<0.000095 UJ	<0.000095 UJ	<0.0048	<0.0095	<0.00078 U	<0.0095	<0.0048	<0.0012 U	<0.0048	<0.0095
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	0.0024	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00096 U	<0.01	<0.005	<0.0014 U	<0.005	<0.01
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.00075 U	<0.0002 U	<0.00019 U	<0.00007 U	<0.00023 U	<0.011 UJ	<0.011	<0.0053	0.00077 J	<0.0053	<0.011	<0.0008 U	<0.000031 U	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.00047 U	<0.0053	<0.011
	MW6B-ROX-110311	11/3/2011		24.67	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	MW6B-ROX-011712	1/17/2012		26.77	NE	<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	<0.00011	<0.00027 U	<0.0055	<0.011	<0.0055	<0.011	<0.0055	0.00055 J	<0.0055	<0.011
	MW6B-ROX-050212	5/2/2012		27.82	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	0.00039 J	<0.005	<0.01
	MW6B-ROX-080112	8/1/2012		28.39	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00049 J	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.0007 J	<0.0051	<0.01
	MW6B-ROX-102412	10/24/2012		30.11	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	0.00057 J	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.00079 J	<0.0051	<0.01
	MW6B-ROX-011713	1/17/2013		31.11	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.0026 J	<0.005	<0.01
	MW6B-ROX-040313	4/3/2013		31.68	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	0.0012 J	<0.0054	<0.011
	MW6B-ROX-070913	7/9/2013		28.25	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW6B-ROX-100713	10/7/2013		28.93	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.00057 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.00084 U	<0.011	<0.0054 UJ	<0.0054	<0.0054	0.0224
	MW6B-ROX-011614	1/16/2014	64.05 - 69.05	31.67	NE	<0.000054	<0.00011	<0.000054	0.000051 J	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	0.000042 J	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-06C	MW6C-ROX-051611	5/16/2011	84.95 - 89.95	25.76	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	0.0025	0.0064	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.00063 U	<0.01	<0.005	<0.0013 U	<0.005	<0.01
	MW6C-ROX-072411	7/24/2011		23.43	NE	0.00016 B	0.00013 B	0.00014 B	0.000041 J	0.00016 B	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	0.00015 B	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0004 U	<0.0053	<0.011
	MW6C-ROX-110311	11/3/2011		24.47	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	MW6C-ROX-011712	1/17/2012		26.50	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.00046 U	<0.011	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW6C-ROX-050212	5/2/2012		27.62	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW6C-ROX-080112	8/1/2012		28.15	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.001 J	<0.005	<0.01
	MW6C-ROX-102412	10/24/2012		27.85	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW6C-ROX-011713	1/17/2013		30.88	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.0022 J	<0.005	<0.01
	MW6C-ROX-040313	4/3/2013		31.41	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01 UJ	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	0.00077 J	<0.0052	<0.01
	MW6C-ROX-070913	7/9/2013		28.03	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW6C-ROX-100713	10/7/2013		28.72	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.00056 U	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0013 U	<0.011	<0.0055 UJ	0.00043 J	<0.0055	<0.011
	MW6C-ROX-011614	1/16/2014	84.95 - 89.95	31.48	NE	<0.000053	<0.00011	<0.000053	0.000041 J	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
MW-06D	MW6D-ROX-051611	5/16/2011	104.72 - 109.72	25.60	NE	<0.000055 UJ	<0.00011 UJ	<0.000055 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0055	0.0027	0.0069	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.00085 U	<0.011	<0.0055	<0.0015 U	<0.0055	<0.011
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.00038 U	<0.00015 U	<0.00017 U	<0.000049 U	<0.00019 U	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00039 U	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.00046 U	<0.0053	<0.011
	MW6D-ROX-110311	11/3/2011		24.31	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01
	MW6D-ROX-011712	1/17/2012		26.33	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0055	<0.011	<0.0055	<0.011	<0.0055	0.00047 J	<0.0055	<0.011
	MW6D-ROX-050212	5/2/2012		27.45	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.0044 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	0.00047 J	<0.005	<0.01
	MW6D-ROX-080212	8/2/2012		30.56	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	0.00022 J	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW6D-ROX-102412	10/24/2012		29.71	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW6D-ROX-011713	1/17/2013		30.75	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW6D-ROX-040313	4/3/2013		31.27	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011 UJ	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	0.00069 J	<0.0053	<0.011
	MW6D-ROX-070913	7/9/2013		27.91	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW6D-ROX-100713	10/7/2013		28.58	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.001 U	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW6D-ROX-011614	1/16/2014	104.72 - 109.72	31.33	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01

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						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-07	MW07-ROX-051311	5/13/2011	42.92 - 52.92	37.50	NE	<0.000054 UJ	<0.00011 UJ	<0.000054 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0054	<0.0032 U	<0.0071 U	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0054	<0.011	<0.00097 U	<0.011	<0.0054	<0.0017 U	<0.0054	<0.011
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.000055 UJ	0.000018 J J	<0.000055 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0055	<0.0035 U	<0.007 U	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.0055	<0.011	<0.0055	<0.0018 U	<0.0055	<0.011
	MW7-ROX-072411	7/24/2011		35.65	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	0.000018 J	<0.00011	<0.0054	<0.011	<0.0054	<0.011	<0.0054 UJ	<0.00044 U	<0.0054	<0.011
	MW-7-ROX-110211	11/2/2011		35.95	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	MW7-ROX-011812	1/18/2012		38.10	NE	<0.00005	<0.000024 U	<0.00005	<0.0001	<0.0001		<0.01 UJ	<0.005	<0.002	0.00049 J	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	0.00045 J	<0.005	<0.01
	MW7-ROX-011812-DUP	1/18/2012		38.10	NE	<0.000056	<0.00003 U	<0.000056	<0.00011	<0.00011		<0.011 UJ	<0.0056	0.00044 J	0.00048 J	<0.011	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW7-ROX-050412	5/4/2012		39.19	NE	0.00011	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00071 J	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.00095 U	<0.005	<0.01
	MW7-ROX-080712	8/7/2012		39.50	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0006 J	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.00058 U	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW7-ROX-103012	10/30/2012		41.23	NE	<0.000058	<0.00012	<0.000058	<0.00012	<0.00012	<0.012	<0.012	<0.0058	0.0015 J	<0.0058	<0.012	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012	<0.0058	<0.0058	<0.0058	<0.012
	MW7-ROX-103012-DUP	10/30/2012		41.23	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.0007 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW7-ROX-011513	1/15/2013		42.21	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00061 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	MW7-ROX-011513-DUP	1/15/2013		42.21	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00055 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01
	MW7-ROX-041013	4/10/2013		42.70	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.00083 J	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW7-ROX-041013-DUP	4/10/2013		42.70	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.00088 J	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW7-ROX-071713	7/17/2013		39.60	NE	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	<0.00011	0.000077 J	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW7-ROX-101613	10/16/2013		40.64	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW7-ROX-013014	1/30/2014	42.92 - 52.92	42.94	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.0007 U	<0.005	<0.01
MW-08	MW08-ROX-051311	5/13/2011	33.60 - 43.60	28.35	NE	<0.000055 UJ	<0.00011 UJ	<0.000055 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0055	<0.0031 U	<0.0055	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0055	<0.011	<0.0018 U	0.0225	<0.0055	<0.0014 U	<0.0055	<0.011
	MW08-ROX-051311D	5/13/2011		28.35	NE	<0.000056 UJ	<0.00011 UJ	<0.000056 UJ	<0.00011 UJ	<0.00011 UJ	<0.011	<0.011	<0.0056	<0.0034 U	<0.0056	<0.011	<0.00011 UJ	<0.00011 UJ	<0.0056	<0.011	<0.0011 U	0.0232	<0.0056	<0.0021 U	<0.0056	<0.011
	MW8-ROX-072411	7/24/2011		26.02	NE	0.00013 B	0.00016 B	0.00016 B	0.000048 J	0.00017 B	<0.011 UJ	<0.011	<0.0054	0.0019 J	<0.0054	<0.011	0.000099 JB	<0.00011	<0.0054	<0.011	<0.0054	0.0228	<0.0054 UJ	<0.0054	0.00077 J	<0.011
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	0.00012 B	0.00019 B	0.00018 B	0.000058 J	0.00021 B	<0.011 UJ	<0.011	<0.0055	0.0013 J	<0.0055	<0.011	0.000099 JB	<0.00011	<0.0055	<0.011	<0.0055	0.0213	<0.0055 UJ	<0.00038 U	0.00054 J	<0.011
	MW-8-ROX-110211	11/2/2011		27.02	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	<0.0019	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	0.0383 J	<0.0048	<0.0048	<0.0048	<0.0095
	MW8-ROX-011812	1/18/2012		29.15	NE	<0.00026	<0.00053	<0.00026	<0.00053	<0.00053		<0.011 UJ	<0.0053	0.00052 J	0.00042 J	<0.011	<0.00053	<0.00053	0.0006 J	<0.011	<0.0053	0.015	<0.0053	<0.0053	<0.0053	<0.011
	MW8-ROX-050412	5/4/2012		30.21	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0204	<0.011	<0.0053	0.00053 J	<0.0053	<0.011	<0.00011	<0.00011	0.00044 J	<0.011	<0.0053	0.0595	<0.0053	<0.00063 U	<0.0053	<0.011
	MW8-ROX-050412-DUP	5/4/2012		30.21	NE	0.00012	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00047 J	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0557	<0.005	<0.005	<0.005	<0.01
	MW8-ROX-080712	8/7/2012		30.97	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00051 J	<0.0054	<0.011	<0.00011	<0.00011	0.00035 J	<0.011	<0.0016 U	0.015	<0.0054	<0.0054	<0.0054	<0.011
	MW8-ROX-080712-DUP	8/7/2012		30.97	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	0.00043 J	<0.0056	<0.011	<0.00011	<0.00011	0.0004 J	<0.011	<0.0018 U	0.0158	<0.0056	<0.0056	<0.0056	<0.011
	MW8-ROX-103012	10/30/2012		32.32	NE	<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	0.00066 B	0.00059 B	<0.0021	<0.011	<0.0053	0.0085 J	<0.0053	0.00082 J	0.00063 J	<0.011
	MW8-ROX-011513	1/15/2013		33.30	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00089 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.019	<0.0056 UJ	<0.0056	<0.0056	<0.011
	MW8-ROX-041013	4/10/2013		33.77	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0023	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0358	<0.0053	0.0013 J	<0.0053	<0.011
	MW8-ROX-071713	7/17/2013		30.43	NE	<0.000052	0.000021 J	<0.000052	0.00004 J	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.009 J	<0.0052	<0.0052	<0.0052	<0.01
	MW8-ROX-071713-DUP	7/17/2013		30.43	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.0004 J	<0.011	<0.0054	0.0089 J	<0.0054	<0.0054	<0.0054	<0.011
	MW8-ROX-101613	10/16/2013		31.59	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.0005 J	<0.011	<0.0054	0.0066 J	<0.0054	<0.0054	<0.0054	<0.011
	MW8-ROX-101613-DUP	10/16/2013		31.59	NE	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.00012	<0.00012	0.0004 J	<0.012	<0.0059	0.0062 J	<0.0059	<0.0059	<0.0059	<0.012
	MW8-ROX-013014	1/30/2014	33.60 - 43.60	34.02	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00053 J	<0.0051	<0.01	<0.0001	<0.0001	0.0005 J	<0.01	<0.0051	0.0124	<0.0051	<0.0011 U	<0.0051	<0.01
	MW8-ROX-013014-DUP	1/30/2014		34.02	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00072 J	<0.0054	<0.011	<0.00011	<0.00011	0.00053 J	<0.011	<0.0054	0.0121	<0.0054	<0.00092 U	<0.0054	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-09	MW09-ROX-050611	5/6/2011	46.45 - 56.45	40.12	NE	<0.000049 UJ	<0.000097 UJ	<0.000049 UJ	<0.000097 UJ	<0.000097 UJ	<0.0097	<0.0097	<0.0049	<0.0019	<0.0049	<0.0097	<0.000097 UJ	<0.000097 UJ	<0.0049	<0.0097	<0.0018 U	<0.0097	<0.0049	<0.00046 U	<0.0049	<0.0097
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.00021 U	<0.00013 U	<0.00015 U	<0.000046 U	<0.00018 U	<0.01 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.01 UJ	<0.0002 U	<0.00011	<0.0054	<0.01 UJ	<0.0054	<0.01 UJ	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW9-ROX-110111	11/1/2011		37.78	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW9-ROX-011612	1/16/2012		39.50	NE	<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	<0.00011	<0.000078 U	<0.0057	<0.011	<0.0057	<0.011	<0.0057	0.00048 J	<0.0057	<0.011
	MW9-ROX-050312	5/3/2012		41.03	NE									0.0016 J J	J											
	MW9-ROX-072712	7/27/2012		41.30	NE	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00043 U	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.00054 U	<0.005	<0.01
	MW9-ROX-102912	10/29/2012		43.17	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW9-ROX-011113	1/11/2013		43.90	NE	<0.000054	<0.00011	0.000026 J	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW9-ROX-040913	4/9/2013		44.67	NE	<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	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0016 UJ	<0.01 UJ	<0.0052 UJ	<0.0018 UJ	<0.0052 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	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW9-ROX-011414	1/14/2014	46.45 - 56.45	44.47	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053 UJ	<0.0053	<0.0053	<0.011
MW-10	MW10-ROX-042811	4/28/2011	44.43 - 54.43	40.20	NE	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0095 UJ	<0.0095	<0.0048	<0.00051 U	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.00061 U	<0.0048	<0.0095
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.00025 U	<0.00013 U	<0.00014 U	<0.000039 U	<0.00017 U	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.00027 U	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005 UJ	<0.005	<0.005	<0.01
	MW10-ROX-110111	11/1/2011		37.72	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	MW10-ROX-011612	1/16/2012		39.28	NE	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	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	0.00081 J	<0.0053	<0.011
	MW10-ROX-050112	5/1/2012		40.86	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.00041 U	<0.0052	<0.01
	MW10-ROX-072712	7/27/2012		41.21	NE	<0.00005	<0.0001	<0.00005	<0.0001 UJ	<0.0001	<0.01	<0.01	<0.005	<0.00067 U	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.00043 U	<0.005	<0.01
	MW10-ROX-102612	10/26/2012		43.08	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW10-ROX-121712	12/17/2012		43.08	NE																					
	MW10-ROX-011013	1/10/2013		44.10	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005 UJ	<0.005	<0.005	<0.01
	MW10-ROX-012113	1/21/2013		44.10	NE	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.0001	<0.0001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001
	MW10-ROX-040913	4/9/2013		44.60	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0018 U	<0.011	<0.0054 UJ	<0.0019 U	<0.0054	<0.011
	MW10-ROX-070813	7/8/2013		42.27	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0027 U	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW10-ROX-100313	10/3/2013		42.38	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW10-ROX-011514	1/15/2014	44.43 - 54.43	44.42	NE	<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	<0.00011	0.000074 J	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011
MW-11	MW11-ROX-050611	5/6/2011	41.66 - 51.66	37.60	NE	<0.000042 UJ	<0.000095 UJ	0.000025 J J	0.000022 J J	0.000014 J J	<0.0095	<0.0095	<0.0048	<0.0028 U	<0.0048	<0.0095	0.000037 J J	<0.000095 UJ	<0.0048	<0.0095	<0.0009 U	<0.0095	<0.0048	<0.001 U	<0.0048	<0.0095
	MW11-ROX-072411	7/24/2011		34.3	NE	0.00013 B	0.00012 B	0.00013 B	0.000035 J	0.00014 B	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	0.00013 B	<0.00011	<0.0056	<0.011	<0.0056	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011
	MW-11-ROX-110211	11/2/2011		35.44	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011
	MW11-ROX-011712	1/17/2012		37.44	NE					0.000065 J J																
	MW11-ROX-043012	4/30/2012		38.66	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW11-ROX-072712	7/27/2012		38.90	NE	<0.000058	<0.00012	<0.000058	<0.00012 UJ	<0.00012	<0.012	<0.012	<0.0058	<0.00056 U	<0.0058	<0.012	<0.00012	<0.00012	<0.0023	<0.012	<0.0058	<0.012	<0.0058	<0.00057 U	<0.0058	<0.012
	MW11-ROX-102512	10/25/2012		40.59	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.00042 U	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW11-ROX-011013	1/10/2013		41.43	NE	<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	<0.0001 UJ	<0.0001 UJ	<0.002 UJ	<0.01 UJ	<0.005 UJ	<0.01 UJ	<0.005 UJ	<0.005 UJ	<0.005 UJ	<0.01 UJ
	MW11-ROX-040813	4/8/2013		42.02	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW11-ROX-070813	7/8/2013		39.24	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0052 U	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW11-ROX-100713	10/7/2013		39.95	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0011 U	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0011 U	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011
	MW11-ROX-011514	1/15/2014	41.66 - 51.66	42.16	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-12	MW12-ROX-051211	5/12/2011	41.92 - 51.92	37.58	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	0.000019 J J	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005	<0.0011 U	<0.005	<0.01
	MW12-ROX-072411	7/24/2011		35.55	NE	0.000072 B	0.00014 B	0.00014 B	0.000053 J	0.00019 B	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01 UJ	0.000072 JB	0.000031 JB	<0.005	<0.01 UJ	<0.005	<0.01 UJ	<0.005 UJ	<0.00039 U	<0.005	<0.01
	MW-12-ROX-110211	11/2/2011		35.70	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	<0.0019	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095 UJ	<0.0048	<0.0048	<0.0048	<0.0095
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	<0.0019	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095 UJ	<0.0048	<0.0048	<0.0048	<0.0095
	MW12-ROX-011712	1/17/2012		37.70	NE	<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	<0.00011	<0.00021 U	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW12-ROX-011712-DUP	1/17/2012		37.70	NE	<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	<0.00011	<0.000051 U	<0.0056	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW12-ROX-043012	4/30/2012		38.98	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW12-ROX-072712	7/27/2012		39.22	NE	<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	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.00063 U	<0.0053	<0.011
	MW12-ROX-102512	10/25/2012		40.95	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.00077 U	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW12-ROX-011013	1/10/2013		41.83	NE	<0.000051	<0.0001	0.000026 J	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051 UJ	<0.0051	<0.0051	<0.01
	MW12-ROX-040813	4/8/2013		42.46	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW12-ROX-070913	7/9/2013		39.28	NE	0.00012 J	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	MW12-ROX-100713	10/7/2013		40.22	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.00062 U	<0.011 UJ	<0.0055 UJ	<0.0055	<0.0055	<0.011
	MW12-ROX-011514	1/15/2014	41.92 - 51.92	42.54	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01 UJ	<0.0001	<0.0001	<0.0021	<0.01 UJ	<0.0052	<0.01 UJ	<0.0052	<0.0052	<0.0052	<0.01
MW-13	MW13-ROX-051311	5/13/2011	25.57 - 35.57	23.65	NE	0.000042 J J	0.000016 J J	<0.00005 UJ	<0.000099 UJ	<0.000099 UJ	<0.0099	<0.0099	<0.005	<0.0027 U	<0.005	<0.0099	0.000059 J J	<0.000099 UJ	<0.005	<0.0099	<0.00086 U	<0.0099	<0.005	<0.0013 U	<0.005	<0.0099
	MW13-ROX-080311	8/3/2011		21.67	NE	0.000037 J	0.000039 J	0.000037 J	0.000053 J	0.000036 J	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	0.000036 J	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.00074 U	<0.005	<0.01
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0056	<0.011	<0.0056	<0.011 UJ	<0.0056	<0.0056	<0.0056	<0.011
	MW13-ROX-012012	1/20/2012		24.77	NE	<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	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.00058 U	<0.0053	<0.011
	MW13-ROX-050712	5/7/2012		25.79	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW13-ROX-080812	8/8/2012		26.67	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW13-ROX-110812	11/8/2012		25.30	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	0.00054 J	<0.005	<0.01
	MW13-ROX-012313	1/23/2013		29.26	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011	<0.0055 UJ	0.0027 J	<0.0055	<0.011
	MW13-ROX-041213	4/12/2013		29.44	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	MW13-ROX-071213	7/12/2013		25.67	NE	<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	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	MW13-ROX-100913	10/9/2013		26.94	NE	0.000022 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00068 J	<0.0052	<0.01	0.000034 J	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW13-ROX-012914	1/29/2014	25.57 - 35.57	29.63	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.00042 U	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	0.00084 J	<0.0052	<0.01	<0.0052	0.00043 J	<0.0052	<0.01
	MW14-ROX-080312	8/3/2012		29.87	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.00049 J	<0.0053	<0.011	<0.00011	<0.00011	0.00076 J	0.00096 J	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW14-ROX-103112	10/31/2012		32.02	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	0.0003 J	<0.01	<0.005	<0.01 UJ	<0.005	0.00044 J	<0.005	<0.01
	MW14-ROX-011813	1/18/2013		33.05	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005 UJ	<0.005	<0.005	<0.01
	MW14-ROX-041113	4/11/2013		33.31	NE	0.00013	<0.00011	0.000054	0.000053 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	MW14-ROX-071213	7/12/2013		30.36	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	0.00066 J	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ	0.00043 J	<0.0053	<0.011
	MW14-ROX-101013	10/10/2013		30.80	NE	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	0.00019 J	<0.011	<0.0057	<0.011	<0.0057	<0.0057	<0.0057	<0.011
	MW14-ROX-012914	1/29/2014	33.42 - 43.42	33.67	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00056 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	0.00045 J	<0.0054	<0.011

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						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
MW-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	MW16-ROX-040813	4/8/2013		43.39	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	MW16-ROX-070813	7/8/2013		40.62	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	MW16-ROX-100813	10/8/2013		41.62	NE	<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	<0.0001 UJ	<0.0001 UJ	<0.0021 UJ	<0.01 UJ	<0.0052 UJ	<0.01 UJ	<0.0052 UJ	<0.0052 UJ	<0.0052 UJ	<0.01 UJ
	MW16-ROX-011514	1/15/2014	37.06 - 47.06	43.39	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00061 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	0.0031 J	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	0.0146	<0.0052 UJ	0.0024 J	<0.0052	<0.01
	MW22-ROX-012313-DUP	1/23/2013		41.80	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.0033 J	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	0.0149	<0.0053 UJ	0.0024 J	<0.0053	<0.011
	MW22-ROX-040513	4/5/2013		42.23	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0269	<0.0053	0.00057 J	<0.0053	<0.011
	MW22-ROX-071113	7/11/2013		39.35	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0017 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.104	<0.0054	<0.0054	<0.0054	<0.011
	MW22-ROX-071113-DUP	7/11/2013		39.35	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.0021 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	0.0978	<0.0056	0.00052 J	<0.0056	<0.011
	MW22-ROX-100913	10/9/2013		40.39	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0863	<0.0054	<0.0054	<0.0054	<0.011
	MW22-ROX-100913-DUP	10/9/2013		40.39	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0826	<0.0054	<0.0054	<0.0054	<0.011
	MW22-ROX-012014	1/20/2014	37.88 - 47.88	42.49	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.053	<0.053	<0.027	<0.011	<0.027	<0.053	<0.00011	<0.00011	<0.011	<0.053	<0.027	0.0399 J	<0.027	<0.027	<0.027	<0.053
	MW22-ROX-012014-DUP	1/20/2014		42.49	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.054	<0.054	<0.027	<0.011	<0.027	<0.054	<0.00011	<0.00011	<0.011	<0.054	<0.027	0.0364 J	<0.027	<0.027	<0.027	<0.054
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	<0.000052	<0.0001	0.000057	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	0.00049 J	<0.0052	<0.01
	MW24-ROX-071113	7/11/2013		40.35	NE	<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		<0.0054	<0.0054	<0.0054	<0.011
	MW24-ROX-100913	10/9/2013		41.27	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	MW24-ROX-011514	1/15/2014	38.89 - 48.89	43.05	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
P-54	P54-ROX-051111	5/11/2011	38.00 - 63.00	37.37	NE	<0.000054 UJ	0.0001 J J	<0.000054 UJ	<0.00011 UJ	<0.00011 UJ	<0.01	<0.01	<0.005	<0.0024 U	<0.005 UJ	<0.01	0.000019 J J	<0.00011 UJ	<0.005	<0.01	<0.005 UJ	<0.01	<0.005 UJ	<0.0011 U	<0.005	<0.01
	P54-ROX-072411	7/24/2011		35.38	NE	0.000079 B	0.00014 B	0.00015 B	0.000053 J	0.00017 B	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	0.000081 JB	0.00002 JB	<0.005	<0.01	<0.005	<0.01	<0.005 UJ	<0.00049 U	<0.005	<0.01
	P54-ROX-110311	11/3/2011		35.49	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P54-ROX-011712	1/17/2012		37.17	NE	<0.000052	<0.000024 U	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P54-ROX-050412	5/4/2012		38.77	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	0.0045 J	<0.01	<0.0051	0.0133	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.00085 U	<0.0051	<0.01
	P54-ROX-080212	8/2/2012		38.95	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P54-ROX-103012	10/30/2012		40.70	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P54-ROX-011113	1/11/2013		41.56	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	P54-ROX-041013	4/10/2013		41.80	NE	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057 UJ	<0.0057	<0.0057	<0.011
	P54-ROX-050313	5/3/2013		41.80	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	P54-ROX-071113	7/11/2013		39.07	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00052 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P54-ROX-100813	10/8/2013		39.94	NE	<0.000057	<0.00011	<0.000057	<0.00011	<0.00011	<0.011	<0.011	<0.0057	<0.0023	<0.0057	<0.011	<0.00011	<0.00011	<0.0023	<0.011	<0.0057	<0.011	<0.0057	<0.0057	<0.0057	<0.011
	P54-ROX-011514	1/15/2014	38.00 - 63.00	42.20	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00058 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
P-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0022	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P55-ROX-011912	1/19/2012		41.09	NE	<0.000052	0.000022 J	<0.000052	<0.0001	<0.0001		<0.01 UJ	<0.0052	<0.0021	<0.00048 U	<0.01	<0.0001	<0.0001	0.00035 J	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P55-ROX-011912-D	1/19/2012		41.09	NE	<0.000054	0.000067 J	0.000061	0.00011	0.000071 J		<0.011 UJ	<0.0054	<0.0022	<0.00035 U	<0.011	<0.00011	0.000086 J	0.00033 J	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P55-ROX-050912	5/9/2012		42.44	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P55-ROX-012113	1/21/2013	40.43 - 50.43	43.60	NE	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.02	<0.01	<0.006	<0.01	<0.02	<0.0001	<0.0001	0.001 J	<0.01	<0.01	0.004 J	<0.01	<0.01	<0.01	<0.001
	P55-ROX-012113	1/21/2013		43.60	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	0.001 J	<0.01	0.00073 J	0.0024 J	<0.0051	0.00069 J	<0.0051	<0.01
	P55-ROX-041513	4/15/2013		43.63	NE	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	0.0017 J	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P55-ROX-071613	7/16/2013		40.06	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.00066 U	<0.0056	<0.011	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	0.0024 J	<0.0056	<0.0056	<0.0056	<0.011
	P55-ROX-101013	10/10/2013		41.67	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	0.0006 J	<0.0055	<0.011	<0.00011	<0.00011	0.0016 J	<0.011	<0.0055	0.0014 J	<0.0055	<0.0055	<0.0055	<0.011
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P56-ROX-011912	1/19/2012		41.81	NE	<0.000051	0.000021 J	<0.000051	<0.0001	<0.0001		<0.01 UJ	<0.0051	<0.00066 U	<0.00053 U	<0.01	<0.0001	<0.0001	0.00064 J	<0.01	<0.0051	<0.01	<0.0051	<0.00044 U	<0.0051	<0.01
	P56-ROX-050812	5/8/2012		43.09	NE	<0.00011 U	<0.00012 U	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P56-ROX-080612	8/6/2012		43.60	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	0.00051 J	<0.01	<0.0014 U	<0.01	<0.0051	<0.00075 U	<0.0051	<0.01
	P56-ROX-103112	10/31/2012		44.80	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	0.00066 J	<0.01	<0.0051	<0.01 UJ	<0.0051	<0.0051	<0.0051	<0.01
	P56-ROX-011713	1/17/2013		45.65	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0044	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P56-ROX-041213	4/12/2013		46.12	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	P56-ROX-071513	7/15/2013		43.25	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055 UJ	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	0.00075 J	<0.011	<0.0055	0.0086 J	<0.0055	<0.0055	<0.0055	<0.011
	P56-ROX-101013	10/10/2013		44.48	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	0.00059 J	<0.011	<0.0055	0.0042 J	<0.0055	<0.0055	<0.0055	<0.011
	P56-ROX-012214	1/22/2014	40.82 - 65.82	46.35	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	0.00047 J	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.00027	<0.00054	<0.00027	<0.00054	<0.00054	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00054	<0.00054	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P57-ROX-021312	2/13/2012		42.13	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00043 J	<0.00043 U	<0.01	<0.0001	<0.0001	0.00087 J	<0.01	<0.0051	0.0045 J	<0.0051	<0.00046 U	<0.0051	<0.01
	P57-ROX-050712	5/7/2012		42.92	NE	0.00011	0.00012	<0.000052	<0.0001	<0.0001	<0.01	<0.01	0.0008 J	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P57-ROX-080612	8/6/2012		43.53	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	0.00079 J	<0.01	<0.00096 U	0.0029 J	<0.005	<0.00087 U	<0.005	<0.01
	P57-ROX-080612-DUP	8/6/2012		43.53	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	0.00073 J	<0.01	<0.001 U	0.0029 J	<0.005	<0.00089 U	<0.005	<0.01
	P57-ROX-110512	11/5/2012		44.98	NE	<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	<0.0001	0.000049 J	0.0006 J	<0.01	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	P57-ROX-012913	1/29/2013		45.92	NE	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.012	<0.012	<0.0059	<0.0024	<0.0059	<0.012	<0.00012	<0.00012	<0.0024	<0.012	<0.0059	0.0023 J J	<0.0059	<0.0059	<0.0059	<0.012
	P57-ROX-041113	4/11/2013		46.29	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P57-ROX-071613	7/16/2013	40.46 - 65.46	43.38	NE	0.00012	<0.00011	<0.000056	<0.00011	<0.00011	<0.011	<0.011	<0.0056 UJ	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	0.00088 J	<0.011	<0.0056	0.002 J	<0.0056	<0.0056	<0.0056	<0.011
	P57-ROX-101413	10/14/2013		44.38	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0012 J	<0.0054	<0.011	<0.00011	<0.00011	0.00082 J	<0.011	<0.0054	0.0029 J	<0.0054	0.00049 J	<0.0054	<0.011
	P57-ROX-020314	2/3/2014	40.46 - 65.46	46.57	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.00067 J	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
P-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.000049	<0.000097	<0.000049	<0.000097	<0.000097	<0.0097	<0.0097	<0.0049	0.003	<0.0049	<0.0097	<0.000097	<0.000097	<0.0049	<0.0097	<0.0049	<0.0097	<0.0049	<0.0049	<0.0049	<0.0097
	P58-ROX-011912	1/19/2012		39.73	NE	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	<0.00011	<0.00011	0.0026 J	<0.011	<0.0053	<0.011	<0.0053	<0.00057 U	<0.0053	<0.011
	P58-ROX-011912-D	1/19/2012		39.73	NE	0.000036 J	0.000036 J	<0.000053	<0.00011	<0.00011		<0.011 UJ	<0.0053	0.024 J	<0.0053	<0.011	<0.00011	<0.00011	0.0023 J	<0.011	<0.0053	<0.011	<0.0053	<0.00059 U	<0.0053	<0.011
	P58-ROX-050712	5/7/2012		40.90	NE	0.00017	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	0.0017 J	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P58-ROX-050712-DUP	5/7/2012		40.90	NE	0.00015	0.000032 J	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P58-ROX-080612	8/6/2012		41.63	NE	0.00024	0.00011	0.000064	0.000043 J	<0.0001	<0.01	<0.01	<0.005	0.00043 J	<0.005	<0.01	0.0001	<0.0001	0.0022	<0.01	<0.005	<0.01	<0.005	<0.00053 U	<0.005	<0.01
	P58-ROX-080612-DUP	8/6/2012		41.63	NE	0.00021	0.000098 J	0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00042 J	<0.005	<0.01	0.000099 J	<0.0001	0.0025	<0.01	<0.005	<0.01	<0.005	<0.00063 U	<0.005	<0.01
	P58-ROX-110612	11/6/2012		43.09	NE																				
	P58-ROX-121012	12/10/2012		43.09	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0103	<0.0054	<0.011	<0.00011	<0.00011	0.002 J	<0.011	<0.0054	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011
	P58-ROX-012213	1/22/2013		44.21	NE	0.00038	0.00022	0.00012	0.00012	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	0.00039	0.000068 J	0.0038	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P58-ROX-041113	4/11/2013		44.40	NE	0.0003	0.00019	0.000095	0.000074 J	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	0.00032	<0.00011	0.0044	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P58-ROX-071613	7/16/2013		41.49	NE	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	0.00012	<0.00011	0.0025	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	P58-ROX-101413	10/14/2013		42.19	NE	<0.000054	0.000067 J	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0099	<0.0054	<0.011	0.000099 J	<0.00011	0.0024	<0.011	<0.0054	0.0016 J	<0.0054	0.00058 J	<0.0054	<0.011
	P58-ROX-020314	2/3/2014	40.21 - 65.21	44.66	NE	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	0.000079 J	<0.0001	0.0016 J	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	0.00019	<0.00011	0.000073	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0028	<0.0053	<0.011	0.00034	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P59-ROX-011912	1/19/2012		42.88	NE	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	0.000085 J	<0.00011	<0.0057	<0.011	<0.0057	0.0133	<0.0057	<0.0005 U	<0.0057	<0.011
	P59-ROX-011912-DUP	1/19/2012		42.88	NE	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	0.000074 J	<0.0001	0.00042 J	<0.01	<0.0051	0.0108	<0.0051	<0.00041 U	<0.0051	<0.01
	P59-ROX-050912	5/9/2012		44.11	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	0.0161	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	0.0085 J	<0.005	<0.005	<0.005	<0.01
	P59-ROX-080212	8/2/2012		44.07	NE	0.00021	0.000036 J	0.000047 J	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.00036 J	<0.011	<0.0053	0.0088 J	<0.0053	<0.0053	<0.0053	<0.011
	P59-ROX-110212	11/2/2012		45.98	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.00031 J	<0.011	<0.0053	0.0102 J J	<0.0053	<0.0053	<0.0053	<0.011
	P59-ROX-110212-DUP	11/2/2012		45.98	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	0.00029 J	<0.01	<0.0052	0.0092 J J	<0.0052	<0.0052	<0.0052	<0.01
	P59-ROX-013013	1/30/2013		46.60	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0041	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	0.0581	<0.0052 UJ	0.0022 J	<0.0052	<0.01
	P59-ROX-041213	4/12/2013		46.95	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0831 J	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	0.0919	<0.0054	<0.0054	<0.0054	<0.011
	P59-ROX-041213-DUP	4/12/2013		46.95	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	0.0518 J	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0914	<0.0053	<0.0053	<0.0053	<0.011
	P59-ROX-071613	7/16/2013		44.13	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054 UJ	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.00041 J	<0.011	<0.0054	0.0583	<0.0054	<0.0054	<0.0054	<0.011
	P59-ROX-101013	10/10/2013		45.50	NE	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	0.000088 J	<0.00011	<0.0022	<0.011	<0.0054	0.078	<0.0054	<0.0054	0.00091 J	<0.011
	P59-ROX-020314	2/3/2014	47.91 - 72.91	47.35	NE	0.000035 J	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	<0.0021	<0.0052	<0.01	0.000046 J	<0.0001	<0.0021	<0.01	<0.0052	0.147 J	<0.0052	<0.0052	<0.0052	<0.01
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	<0.000095 U	<0.0001	<0.000088 U	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.00011 U	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P66-ROX-051012	5/10/2012		32.48	NE	<0.00005	<0.0001	0.000024 J	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.00053 U	<0.005	<0.01	<0.0001	<0.0001	0.0018 J	<0.01	<0.005	<0.01	<0.005	0.00054 J	<0.005	<0.01
	P66-ROX-080312	8/3/2012		30.51	NE	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	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P66-ROX-103112	10/31/2012		34.75	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	0.0019 J	<0.01	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	P66-ROX-011813	1/18/2013		35.70	NE	<0.000053	<0.00011	<0.000028 U	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.0018 J	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	P66-ROX-041113	4/11/2013		36.03	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	0.0025	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P66-ROX-071213	7/12/2013		33.20	NE	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	0.00017	0.00017	0.0016 J	<0.011	<0.0056	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011
	P66-ROX-101013	10/10/2013		33.66	NE	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	<0.00011	<0.00011	0.0016 J	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	P66-ROX-110713	11/7/2013		33.66	NE																				
	P66-ROX-012914	1/29/2014	34.72 - 59.72	36.39	NE	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	0.000047 J	0.000035 J	0.0019 J	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
P-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P74-ROX-011912	1/19/2012		38.77	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095		<0.0095 UJ	<0.0048	<0.0019	<0.00043 U	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095
	P74-ROX-050712	5/7/2012		39.92	NE	0.00012	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P74-ROX-080612	8/6/2012		40.71	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0012 U	0.0039 J	<0.005	<0.00082 U	<0.005	<0.01
	P74-ROX-110112	11/1/2012		41.72	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.0052	0.00044 J	<0.0052	<0.01	<0.0001	<0.0001	0.00031 J	0.001 J	<0.0052	0.008 J J	<0.0052	<0.0052	<0.0052	<0.01
	P74-ROX-011713	1/17/2013		42.65	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	0.0028 J	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0021 J	<0.0051	<0.0051	<0.0051	<0.01
	P74-ROX-041113	4/11/2013		42.83	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P74-ROX-071513	7/15/2013		40.11	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	0.0013 J	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P74-ROX-101413	10/14/2013		41.72	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00097 J	<0.0054	<0.011	<0.00011	<0.00011	0.00033 J	0.0012 J	<0.0054	0.0019 J	<0.0054	0.00047 J	<0.0054	<0.011
	P74-ROX-012414	1/24/2014	44.43 - 69.43	43.28	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.00063 J	0.00097 J	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.00048 J	<0.0051	<0.01
P-93A	P93A-ROX-050511	5/5/2011	48.17 - 63.17	41.88	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	0.00035 J	<0.01	<0.00073 U	<0.01	<0.005	<0.001 U	<0.005	<0.01
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.003	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.0029 U	<0.01	<0.005	<0.001 U	<0.005	<0.01
	P93A-ROX-102611	10/26/2011		39.43	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0075	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93A-ROX-012012	1/20/2012		41.66	NE	<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	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.00038 U	<0.0048	<0.0095
	P93A-ROX-050812	5/8/2012		42.75	NE	<0.0001 U	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0029	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93A-ROX-080912	8/9/2012		43.66	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	0.0032 J	<0.011	<0.0054	0.0153	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P93A-ROX-110712	11/7/2012		45.00	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0026	<0.0052	<0.01	<0.0001	<0.0001	0.00027 J	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93A-ROX-110712-DUP	11/7/2012		45.00	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93A-ROX-012313	1/23/2013		45.89	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0099	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01
	P93A-ROX-012313-DUP	1/23/2013		45.89	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.011	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052 UJ	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01
	P93A-ROX-041113	4/11/2013		46.29	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93A-ROX-041113-DUP	4/11/2013		46.29	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93A-ROX-071813	7/18/2013		43.25	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	0.00024 J	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	P93A-ROX-101113	10/11/2013		44.18	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93A-ROX-012914	1/29/2014	48.17 - 63.17	46.53	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
P-93B	P93B-ROX-050511	5/5/2011	74.60 - 76.60	41.96	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005	<0.001 U	<0.005	<0.01
	P93B-ROX-081811	8/18/2011		39.44	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.001 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0021 U	<0.01	<0.0052	<0.00077 U	<0.0052	<0.01
	P93B-ROX-102611	10/26/2011		39.48	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0103	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93B-ROX-012012	1/20/2012		41.72	NE	<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	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095
	P93B-ROX-050812	5/8/2012		42.79	NE	<0.000051	<0.00012 U	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93B-ROX-080912	8/9/2012		43.69	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.0036	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.00051 U	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P93B-ROX-110712	11/7/2012		44.98	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0017 J	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93B-ROX-110712-DUP	11/7/2012		44.98	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00057 J	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93B-ROX-012313	1/23/2013		45.89	NE	0.00022	0.00011	0.00013	0.00012	0.00012	<0.011	<0.011	<0.0053	0.0055	0.0032 J	0.0013 J	0.00012	0.00012	<0.0021	<0.011	<0.0053 UJ	0.0021 J	0.00024 J J	0.003 J	<0.0053	<0.011
	P93B-ROX-041113	4/11/2013		46.32	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.0013 J	<0.0051	<0.01
	P93B-ROX-071813	7/18/2013		43.30	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	0.0005 J	<0.0056	<0.011
	P93B-ROX-101613	10/16/2013		44.43	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93B-ROX-101613-DUP	10/16/2013		44.43	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93B-ROX-012814	1/28/2014	74.60 - 76.60	46.58	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.00072 J	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	0.00045 J	<0.0055	<0.011
	P93B-ROX-012814-DUP	1/28/2014		46.58	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0012 J	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.00048 J	<0.0051	<0.01

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																	
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
P-93C	P93C-ROX-050611	5/6/2011	94.26 - 96.26	41.84	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.0022 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005	<0.0011 U	<0.005	<0.01
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0092	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.0015 U	<0.01	<0.005	<0.00064 U	<0.005	<0.01
	P93C-ROX-102611	10/26/2011		39.36	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93C-ROX-012012	1/20/2012		41.57	NE	<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	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93C-ROX-050812	5/8/2012		42.68	NE	<0.00012 U	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.008	<0.0053	<0.011	<0.00011	<0.00011	<0.0053	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P93C-ROX-080912	8/9/2012		43.57	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0043	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.00046 U	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93C-ROX-110812	11/8/2012		45.12	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.00081 J	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93C-ROX-012313	1/23/2013		45.78	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	0.0049	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055 UJ	<0.011	<0.0055 UJ	0.0025 J	<0.0055	<0.011
	P93C-ROX-041213	4/12/2013		46.21	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005 UJ	<0.005	<0.005	<0.01
	P93C-ROX-071813	7/18/2013		43.31	NE	<0.000056	0.00015	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	<0.0022	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056	<0.0056	<0.0056	<0.011
	P93C-ROX-080813	8/8/2013		43.31	NE																				
	P93C-ROX-101613	10/16/2013		44.31	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93C-ROX-012414	1/24/2014	94.26 - 96.26	46.44	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	<0.01	<0.0051	0.00051 J	<0.0051	<0.01
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.00005 UJ	<0.0001 UJ	<0.00005 UJ	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.005	<0.0027 U	<0.005	<0.01	<0.0001 UJ	<0.0001 UJ	<0.005	<0.01	<0.005	<0.01	<0.005	<0.0011 U	<0.005	<0.01
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.000015 U	<0.0001	<0.005	<0.01	<0.0018 U	<0.01	<0.005	<0.0011 U	<0.005	<0.01
	P93D-ROX-102711	10/27/2011		39.59	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P93D-ROX-012012	1/20/2012		41.77	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0054	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P93D-ROX-050812	5/8/2012		42.96	NE	<0.0001 U	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P93D-ROX-080812	8/8/2012		43.71	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.0021 U	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93D-ROX-110812	11/8/2012		NM	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	P93D-ROX-012213	1/22/2013		44.21	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P93D-ROX-041113	4/11/2013		46.37	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P93D-ROX-071213	7/12/2013		43.51	NE	<0.000056	<0.00011	<0.000056	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0056	0.00057 J	<0.0056	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0056	<0.011	<0.0056 UJ	0.00045 J	<0.0056	<0.011
	P93D-ROX-101113	10/11/2013		44.24	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	<0.002	<0.005	<0.01 UJ	<0.0001	<0.0001	<0.002	<0.01 UJ	<0.005	<0.01 UJ	<0.005	<0.005	<0.005	<0.01
	P93D-ROX-013114	1/31/2014	125.75 - 127.75	46.62	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0045	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<0.000048	<0.000095	<0.000048	<0.000095	<0.000095	<0.0095	<0.0095	<0.0048	0.0053	<0.0048	<0.0095	<0.000095	<0.000095	<0.0048	<0.0095	<0.0048	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095
	P114-ROX-012012	1/20/2012		27.17	NE	<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	<0.0001	0.000053 J	<0.0051	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	P114-ROX-050912	5/9/2012		28.09	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0015 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P114-ROX-080912	8/9/2012		29.13	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	0.0039	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	P114-ROX-110912	11/9/2012		30.90	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	<0.0021	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	<0.0052	<0.0052	<0.01
	P114-ROX-012313	1/23/2013		30.22	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	0.0059	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053 UJ	<0.011	<0.0053 UJ	0.0024 J	<0.0053	<0.011
	P114-ROX-041513	4/15/2013		31.80	NE	<0.000052	<0.0001	<0.000052	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0052	0.0023	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	0.00047 J	<0.0052	<0.01
	P114-ROX-071813	7/18/2013		27.22	NE	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	<0.00011	0.000073 J	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	P114-ROX-071813-DUP	7/18/2013		27.22	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	P114-ROX-101713	10/17/2013		29.43	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	P114-ROX-012814	1/28/2014	32.67 - 52.67	32.11	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	0.00066 J	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						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)	Chrysene (1,2-Benzphenanthracene)	Dibenzo(a,h)anthracene	Dibenzofuran	2,4-Dichlorophenol	Diethyl phthalate	2,4-Dimethylphenol	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,6-Dinitrotoluene
					Screening Values (mg/L)	0.00013 [1]	0.0002 [1]	0.00018 [1]	0.21 [3]	0.00017 [1]	28 [1]	0.7 [3]	0.01 [2]	0.006 [2]	1.4 [2]		0.0015 [2]	0.0003 [1]	0.007 [3]	0.021 [2]	5.6 [1]	0.14 [2]		0.7 [1]	0.14 [2]	0.00031 [2]
Location	Sample ID	Sample Date	Screened Interval (ft btoc)	Depth to Water (ft btoc)	Product Thickness (ft)	(mg/L)	Analytical Results (mg/L)																		
ROST-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.00065 J	<0.0052	<0.01	<0.0001	<0.0001	<0.0052	<0.01	<0.0052	<0.01	<0.0052	<0.00043 U	<0.0052	<0.01
	ROST3PZ-ROX-080712	8/7/2012		39.00	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	0.0016 J	<0.011	<0.00011	<0.00011	<0.0022	<0.011	0.0033 J	<0.011	<0.0054	0.0049 J	<0.0054	<0.011
	ROST3PZ-ROX-110112	11/1/2012		40.82	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011 UJ	<0.0053	0.0017 J	<0.0053	<0.011
ROST-3-MW	ROST3MW-ROX-012313	1/23/2013	37.81 - 47.81	41.50	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.005 UJ	<0.01	<0.005 UJ	<0.005	<0.005	<0.01
	ROST3MW-ROX-040513	4/5/2013				<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	0.00044 J	<0.0054	<0.011
	ROST3MW-ROX-071113	7/11/2013		39.50	NE									0.00061 J					0.00025 J			0.0016 J J				
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	<0.0022	<0.0054	<0.011 UJ	<0.00011	<0.00011	<0.0022	<0.011 UJ	<0.0054	<0.011 UJ	<0.0054	<0.0054	<0.0054	<0.011
	ROST3MW-ROX-011714	1/17/2014	37.81 - 47.81	42.20	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0053	<0.0021	<0.0053	<0.011 UJ	<0.00011	<0.00011	<0.0021	<0.011 UJ	<0.0053	<0.011 UJ	<0.0053	<0.0053	<0.0053	<0.011
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	0.00027 J	<0.01	<0.005	<0.01	<0.005	<0.00058 U	<0.005	<0.01
	ROST4PZ-C-ROX-072512	7/25/2012		39.10	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	0.00042 J	<0.0053	<0.00051 U	<0.0053	<0.011	<0.00011	<0.00011	0.00036 J	<0.011	0.0012 J	0.003 J	<0.0053	0.0015 J	<0.0053	<0.011
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE	<0.000052	<0.0001	<0.000052	<0.0001	<0.0001	<0.01	<0.01	<0.0052	0.0045	<0.0052	<0.01	<0.0001	<0.0001	<0.0021	<0.01	<0.0052	<0.01	<0.0052	0.0018 J	<0.0052	<0.01
	ROST4PZ(C)-ROX-011113	1/11/2013		41.42	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011
	ROST4PZC-ROX-041013	4/10/2013		42.27	NE	<0.000055	<0.00011	<0.000055	<0.00011	<0.00011	<0.011	<0.011	<0.0055	<0.0022	<0.0055	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0055	<0.011	<0.0055	<0.0055	<0.0055	<0.011
	ROST4PZC-ROX-071113	7/11/2013		40.18	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011 UJ	<0.011	<0.0054	0.0032	<0.0054	<0.011	<0.00011	<0.00011	<0.0022	<0.011	<0.0054	<0.011	<0.0054	<0.0054	<0.0054	<0.011
	ROST4PZC-ROX-100913	10/9/2013		39.91	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	<0.011	<0.0053	<0.0053	<0.0053	<0.011
	ROST4PZC-ROX-011714	1/17/2014	34.95 - 44.95	40.97	NE	<0.000059	<0.00012	<0.000059	<0.00012	<0.00012	<0.01 UJ	<0.012	<0.0059	<0.0024	<0.0059	<0.01 UJ	<0.00012	<0.00012	<0.0024	<0.01 UJ	<0.0059	<0.01 UJ	<0.0059	<0.0059	<0.0059	<0.012
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	0.0025	<0.0051	<0.01	<0.0001	<0.0001	<0.0051	<0.01	<0.0051	0.0109	<0.0051	<0.0051	<0.0051	<0.01
	T12-ROX-011912	1/19/2012		41.0	NE	<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	<0.00011	0.00005 J	0.00029 J	<0.011	<0.0056	0.0095 J	<0.0056	<0.00048 U	<0.0056	<0.011
	T12-ROX-050912	5/9/2012		42.62	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.0001	<0.0001	<0.005	<0.01	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01
	T12-ROX-080212	8/2/2012		41.92	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	<0.00011	<0.00011	0.0003 J	<0.011	<0.0054	0.0153	<0.0054	<0.0054	<0.0054	<0.011
	T12-ROX-110512	11/5/2012		43.91	NE	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.01 UJ	<0.01	<0.005	0.00054 J	<0.005	<0.01	<0.0001	<0.0001	0.00029 J	<0.01	<0.005	0.0028 J J	<0.005	<0.005	<0.005	<0.01
	T12-ROX-011813	1/18/2013		44.50	NE	<0.000053	<0.00011	<0.000053	<0.00011	<0.00011	<0.011	<0.011	<0.0053	<0.0021	<0.0053	<0.011	<0.00011	<0.00011	<0.0021	<0.011	<0.0053	0.0065 J	<0.0053 UJ	<0.0053	<0.0053	<0.011
	T12-ROX-041513	4/15/2013		44.99	NE	<0.000051	<0.0001	<0.000051	<0.0001 UJ	<0.0001 UJ	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	0.00048 J	<0.01	<0.0051	<0.01	<0.0051	<0.0051	<0.0051	<0.01
	T12-ROX-071613	7/16/2013		42.33	NE	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	<0.00011	<0.00011	0.00042 J	<0.011	<0.0054	0.0096 J	<0.0054	<0.0054	<0.0054	<0.011
	T12-ROX-101513	10/15/2013		43.73	NE	<0.000054	<0.00011	<0.000054	<0.00011	<0.00011	<0.011	<0.011	<0.0054	<0.0022	<0.0054	<0.011	0.000028 J	<0.00011	0.00029 J	<0.011	<0.0054	0.0047 J	<0.0054	<0.0054	<0.0054	<0.011
	T12-ROX-012414	1/24/2014	46.46 - 72.46	45.26	NE	<0.000051	<0.0001	<0.000051	<0.0001	<0.0001	<0.01	<0.01	<0.0051	<0.002	<0.0051	<0.01	<0.0001	<0.0001	<0.002	<0.01	<0.0051	0.0073 J	<0.0051	0.00044 J	<0.0051	<0.01

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-042911	4/29/2011	43.41 - 58.41	38.37	NE	<0.0063	<0.0063	<0.0063		<0.0063	<0.0063		<0.0063	<0.013	<0.013	<0.013	<0.0063	<0.0063 UJ	<0.0063	<0.013	<0.0063	<0.0063 UJ	<0.0063
	MW1-ROX-072711	7/27/2011		35.77	NE	<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
	MW1-ROX-120511	12/5/2011		37.10	NE	<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
	MW1-ROX-011612	1/16/2012	48.80 - 58.80	37.75	NE	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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	0.000033 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	<0.00011	<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	48.80 - 58.80	42.77	NE	<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
MW-02	MW02-ROX-051011	5/10/2011	47.19 - 62.19	39.14	NE	<0.0001 UJ	<0.0001 UJ	<0.0052		<0.0001 UJ	<0.0052	0.0049 J J	0.0118 J	0.0062 J	0.0119	<0.01	<0.0052 UJ	<0.0052	<0.0052	<0.01	<0.000052 UJ	0.0057	<0.0001
	MW2-ROX-072711	7/27/2011		37.04	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0098	0.0167	<0.01	0.0193 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0086	<0.0001
	MW2-ROX-072711-DUP	7/27/2011		37.04	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0096	0.0169	<0.01	0.0144 J	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0075	<0.0001
	MW2-ROX-112811	11/28/2011	49.87 - 59.87	38.03	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.0141	0.0299	<0.01	<0.01	<0.01	<0.005	<0.005 UJ	<0.005	<0.01	<0.00005	<0.005 UJ	<0.0001
	MW2-ROX-011612	1/16/2012		38.89	NE	<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	<0.0001	<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	<0.00011	<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	0.000061 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	0.00004 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	<0.00011	<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	<0.00011	<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	<0.00011	<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	49.87 - 59.87	44.00	NE	<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
MW-03	MW03-ROX-051011	5/10/2011	30.98 - 45.98	24.79	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00019 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW3-ROX-080311	8/3/2011		22.72	NE	<0.000095	<0.000095	<0.0048		<0.000095	<0.0048	0.00029	0.00017 J	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	<0.0048 UJ	<0.000095
	MW3-ROX-112911	11/29/2011	34.67 - 44.67	24.06	NE	<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
	MW3-ROX-112911-DUP	11/29/2011		24.06	NE	<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
	MW3-ROX-011612	1/16/2012		24.93	NE	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	<0.0001	<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	<0.00011	<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	<0.0001	<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	0.000047 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	<0.00011	<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	<0.00011	<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	<0.00011	<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	34.67 - 44.67	29.91	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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	MW04-ROX-051111	5/11/2011	42.63 - 57.63	36.19	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00033 J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW4-ROX-072611	7/26/2011		34.15	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00044	0.00029	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW4-ROX-072611-DUP	7/26/2011		34.15	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00031	0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW4-ROX-121511	12/15/2011		33.99	NE	<0.0001	<0.0001	<0.0052		<0.00043 U	<0.0052	0.00028	0.00026	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW4-ROX-011612	1/16/2012	46.06 - 56.06	36.00	NE	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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.000047 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	<0.0001	<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	<0.00011	<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	<0.00012	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	46.06 - 56.06	41.09	NE	<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
MW-05	MW05-ROX-051211	5/12/2011	31.13 - 46.13	23.98	NE	<0.00011 UJ	<0.00011 UJ	<0.0053		<0.00011 UJ	<0.0053	<0.0053 UJ	0.00004 J J	<0.011	<0.011	<0.011	<0.0053 UJ	<0.0053	<0.0053	<0.011	<0.000053 UJ	<0.0053 UJ	<0.00011
	MW5-ROX-072611	7/26/2011		22.00	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00056	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW5-ROX-072611-DUP	7/26/2011		22.00	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00075	<0.0002	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	<0.0001
	MW5-ROX-112111	11/21/2011	33.97 - 43.97	23.46	NE	0.00041	<0.00011	<0.0053		<0.00011	<0.0053	0.00051 J	<0.00021	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000053	<0.0053	<0.00011
	MW5-ROX-011712	1/17/2012		24.76	NE	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	33.97 - 43.97	29.59	NE	<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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-06A	MW6A-ROX-051611	5/16/2011	31.98 - 46.98	26.10	NE	<0.0001 UJ	0.00025 J	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6A-ROX-072611	7/26/2011		23.76	NE	<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-112111	11/21/2011	34.83 - 44.83	25.49	NE	<0.0001	<0.0001	<0.0052		0.0015 J	<0.0052	<0.00021 UJ	<0.00021	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	<0.000052	<0.0052	<0.0001
	MW6A-ROX-112111-DUP	11/21/2011		25.49	NE	<0.0001	<0.0001	<0.0051		<0.0001 UJ	<0.0051	<0.0002 UJ	<0.0002	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	<0.000051	<0.0051	<0.0001
	MW6A-ROX-011712	1/17/2012		26.74	NE	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	34.83 - 44.83	31.62	NE	<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	<0.00011	<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
MW-06B	MW6B-ROX-051611	5/16/2011	64.05 - 69.05	25.95	NE	<0.000095 UJ	<0.000095 UJ	<0.0048		<0.000095 UJ	<0.0048	<0.0048 UJ	<0.00019 UJ	<0.0095	<0.0095	<0.0095	<0.0048 UJ	<0.0048	<0.0048	<0.0095	<0.000048 UJ	<0.0048	<0.000095
	MW6B-ROX-051611-DUP	5/16/2011		25.95	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6B-ROX-072311	7/23/2011		23.60	NE	<0.00021 U	<0.00011	<0.0053		<0.000057 U	<0.0053	<0.00021	<0.000022 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.000044 U	<0.0053 UJ	<0.00023 U
	MW6B-ROX-110311	11/3/2011		24.67	NE	<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-011712	1/17/2012		26.77	NE	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	64.05 - 69.05	31.67	NE	<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

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TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-06C	MW6C-ROX-051611	5/16/2011	84.95 - 89.95	25.76	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	MW6C-ROX-072411	7/24/2011		23.43	NE	0.000024 JB	<0.00011	<0.0053		0.000025 J	<0.0053	<0.00021	0.000017 JB	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.00002 JB	<0.0053 UJ	0.000023 JB
	MW6C-ROX-110311	11/3/2011		24.47	NE	<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	<0.00011 U	<0.005	<0.0001
	MW6C-ROX-011712	1/17/2012		26.50	NE	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	84.95 - 89.95	31.48	NE	<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
MW-06D	MW6D-ROX-051611	5/16/2011	104.72 - 109.72	25.60	NE	<0.00011 UJ	<0.00011 UJ	<0.0055		<0.00011 UJ	<0.0055	<0.0055 UJ	<0.00022 UJ	<0.011	<0.011	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011	<0.000055 UJ	<0.0055	<0.00011
	MW6D-ROX-072311	7/23/2011		23.29	NE	<0.000067 U	<0.00011	<0.0053		<0.000033 U	<0.0053	<0.00021	<0.000018 U	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	<0.00004 U	<0.0053 UJ	<0.000063 U
	MW6D-ROX-110311	11/3/2011		24.31	NE	<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-011712	1/17/2012		26.33	NE	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	104.72 - 109.72	31.33	NE	<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

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						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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	MW07-ROX-051311	5/13/2011	42.92 - 52.92	37.50	NE	<0.00011 UJ	0.0001 J J	<0.0054		<0.00011 UJ	<0.0054	0.0026 J J	0.0049 J	<0.011	0.00082 J	<0.011	<0.0054 UJ	<0.0054	<0.0054	<0.011	0.00017 J	0.0774	0.000044 J
	MW07-ROX-051311D	5/13/2011		37.50	NE	<0.00011 UJ	0.000097 J J	<0.0055		<0.00011 UJ	<0.0055	0.0026 J J	0.0047 J	<0.011	0.00078 J	<0.011	<0.0055 UJ	<0.0055	<0.0055	<0.011	0.00017 J	0.0793	0.000051 J
	MW7-ROX-072411	7/24/2011		35.65	NE	0.00003 J	0.000066 J	<0.0054		<0.00011	<0.0054	0.0024	0.003	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.000082 B	<0.0513 UJ	0.00003 J
	MW-7-ROX-110211	11/2/2011		35.95	NE	<0.0001	<0.00028 U	<0.005		<0.0001	<0.005	<0.0043 U	<0.0059 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00033 U	0.0702	<0.0001
	MW7-ROX-011812	1/18/2012		38.10	NE	<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	<0.00011	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	0.000039 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	<0.0001	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	<0.00012	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	<0.00011	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	0.00004 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	<0.0001	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	0.000039 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	0.000068 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	<0.00011	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	<0.00011	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	42.92 - 52.92	42.94	NE	<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
MW-08	MW08-ROX-051311	5/13/2011	33.60 - 43.60	28.35	NE	0.00003 J J	0.00023 J	<0.0055		<0.00011 UJ	<0.0055	0.0053 J J	0.0075 J	0.0108 J	0.0243	<0.011	0.0041 J J	<0.0055	<0.0055	<0.011	0.000086 J	0.209	0.000028 J
	MW08-ROX-051311D	5/13/2011		28.35	NE	<0.00011 UJ	0.00021 J	<0.0056		<0.00011 UJ	<0.0056	0.0055 J J	0.0089 J	0.0105 J	0.0249	<0.011	<0.0056 UJ	<0.0056	<0.0056	<0.011	0.00012 J	0.208	<0.00011
	MW8-ROX-072411	7/24/2011		26.02	NE	0.000031 JB	0.00034	<0.0054		0.000032 J	<0.0054	0.0055	0.0068	0.0205	0.0486	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.00014 B	0.0972 J	0.000031 JB
	MW8-ROX-072411-DUP	7/24/2011		26.02	NE	0.000022 JB	0.0003	<0.0055		0.000042 J	<0.0055	0.0052	0.0064	0.0177	0.0423	<0.011	<0.0055	<0.0055	<0.0055	<0.011	0.00011 B	0.0906 J	0.000023 JB
	MW-8-ROX-110211	11/2/2011		27.02	NE	<0.000095	<0.00032 U	<0.0048		<0.000095	<0.0048	<0.0094 U	<0.0119 U	0.0152	0.0242	<0.0095	<0.0048	<0.0048	<0.0048	<0.0095	<0.000048	0.134	<0.000095
	MW8-ROX-011812	1/18/2012		29.15	NE	<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	<0.00011	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	<0.0001	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	<0.00011	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	<0.00011	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	0.00059 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	<0.00011	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	0.000056 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	<0.0001	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	<0.00011	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	<0.00011	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	<0.00012	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	33.60 - 43.60	34.02	NE	<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	<0.00011	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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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	MW09-ROX-050611	5/6/2011	46.45 - 56.45	40.12	NE	0.00002 J J	<0.000097 UJ	<0.0049		<0.000097 UJ	<0.0049	<0.0049 UJ	<0.00019 UJ	<0.0097	<0.0097	<0.0097	<0.0049 UJ	<0.0049	<0.0049	<0.0097	<0.000049 UJ	<0.0049	<0.000097
	MW9-ROX-072311	7/23/2011		38.06	NE	<0.000044 U	<0.00011	<0.0054		<0.000031 U	<0.0054	<0.00022	<0.00022	<0.01 UJ	<0.01 UJ	<0.011	<0.0054	<0.0054	<0.0054	<0.01 UJ	<0.00003 U	<0.005 UJ	<0.000046 U
	MW9-ROX-110111	11/1/2011		37.78	NE	<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-011612	1/16/2012		39.50	NE	<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	<0.0001	<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	<0.0001	<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	0.000066 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	<0.0001 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	<0.0001	<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	46.45 - 56.45	44.47	NE	<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
MW-10	MW10-ROX-042811	4/28/2011	44.43 - 54.43	40.20	NE	<0.0048	<0.0048	<0.0048		<0.0048	<0.0048		<0.0048	<0.0095	<0.0095	<0.0095	<0.0048	<0.0048 UJ	<0.0048	<0.0095	<0.0048	<0.0048 UJ	<0.0048
	MW10-ROX-072311	7/23/2011		38.01	NE	<0.000047 U	<0.0001	<0.005		<0.000031 U	<0.005	<0.0002	<0.00002 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000027 U	<0.005 UJ	<0.000044 U
	MW10-ROX-110111	11/1/2011		37.72	NE	<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
	MW10-ROX-011612	1/16/2012		39.28	NE	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	<0.0001	<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	<0.0001	<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	0.000052 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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	44.43 - 54.43	44.42	NE	<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
MW-11	MW11-ROX-050611	5/6/2011	41.66 - 51.66	37.60	NE	0.000026 J J	<0.000095 UJ	<0.0048		0.000015 J J	<0.0048	<0.0048 UJ	<0.00019 UJ	<0.0095	<0.0095	<0.0095	<0.0048 UJ	<0.0048	<0.0048	<0.0095	0.000025 J J	<0.0048	0.000026 J
	MW11-ROX-072411	7/24/2011		34.3	NE	0.000025 JB	<0.00011	<0.0056		0.000026 J	<0.0056	<0.00022	0.000023 JB	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	0.000021 JB	<0.0056 UJ	0.000024 JB
	MW-11-ROX-110211	11/2/2011		35.44	NE	<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-011712	1/17/2012		37.44	NE																		
	MW11-ROX-043012	4/30/2012		38.66	NE	<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	<0.00012	<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	<0.00011	<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	<0.0001 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	<0.00011	<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	<0.00011	<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	<0.00011	<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	41.66 - 51.66	42.16	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-051211	5/12/2011	41.92 - 51.92	37.58	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005 UJ	<0.0001
	MW12-ROX-072411	7/24/2011		35.55	NE	0.000035 JB	<0.0001	<0.005		0.000047 J	<0.005	<0.0002	<0.0002	<0.01 UJ	<0.01 UJ	<0.01	<0.005	<0.005	<0.005	<0.01 UJ	0.000024 JB	<0.005 UJ	0.00004 JB
	MW-12-ROX-110211	11/2/2011		35.70	NE	<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	<0.0048	<0.000095
	MW-12-ROX-110211-DUP	11/2/2011		35.70	NE	<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	<0.0048	<0.000095
	MW12-ROX-011712	1/17/2012		37.70	NE	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	0.000045 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	0.000044 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	<0.00011	<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	<0.00011	<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	41.92 - 51.92	42.54	NE	<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
MW-13	MW13-ROX-051311	5/13/2011	25.57 - 35.57	23.65	NE	0.000032 J J	0.00023 J	<0.005		<0.000099 UJ	<0.005	<0.005 UJ	0.00015 J J	<0.0099	<0.0099	<0.0099	<0.005 UJ	<0.005	<0.005	<0.0099	0.000095 J	<0.005 UJ	0.000089 J
	MW13-ROX-080311	8/3/2011		21.67	NE	<0.0001	<0.0001	<0.005		0.00004 J	<0.005	<0.0002	0.00011 J	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.000054 U	<0.005 UJ	0.000041 J
	MW13-ROX-110311	11/3/2011		22.85	NE	<0.00011	<0.00033 U	<0.0056		<0.00011	<0.0056	<0.00081 U	<0.0003 U	<0.011	<0.011	<0.011	<0.0056	<0.0056	<0.0056	<0.011	<0.000056	<0.0056	<0.00018 U
	MW13-ROX-012012	1/20/2012		24.77	NE	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.000042	<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	<0.0001	<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	25.57 - 35.57	29.63	NE	<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
MW-14	MW14-ROX-110911	11/9/2011	Unknown			<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
	MW14-ROX-051012	5/10/2012	33.42 - 43.42	NM	NE	<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		29.87	NE	<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	<0.0001	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	<0.0001	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	0.000068 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	<0.00011	<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	<0.00011	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	33.42 - 43.42	33.67	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-16	MW16-ROX-012313	1/23/2013	37.06 - 47.06	43.05	NE	<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	<0.0001	<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	<0.00011	<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	<0.0001 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	37.06 - 47.06	43.39	NE	<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
MW-22	MW22-ROX-012313	1/23/2013	37.88 - 47.88	41.80	NE	<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	<0.00011	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	<0.00011	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	<0.00011	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	<0.00011	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	<0.00011	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	<0.00011	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	37.88 - 47.88	42.49	NE	<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	<0.00011	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
MW-24	MW24-ROX-040513	4/5/2013	38.89 - 48.89	43.39	NE	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	<0.00011	<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	<0.00011	<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	38.89 - 48.89	43.05	NE	<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
P-54	P54-ROX-051111	5/11/2011	38.00 - 63.00	37.37	NE	0.000031 J J	<0.00011 UJ	<0.005		<0.00011 UJ	<0.005	<0.005 UJ	<0.00022 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.000054 UJ	<0.005	0.000028 J
	P54-ROX-072411	7/24/2011		35.38	NE	0.000035 JB	<0.0001	<0.005		0.00004 J	<0.005	<0.0002	0.000026 JB	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.000025 JB	<0.005 UJ	0.000031 JB
	P54-ROX-110311	11/3/2011		35.49	NE	<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
	P54-ROX-011712	1/17/2012		37.17	NE	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	38.00 - 63.00	42.20	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-55	P55-ROX-103111	10/31/2011	39.82 - 64.82	39.15	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	0.00065	0.00096	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00016	<0.005	<0.0001
	P55-ROX-011912	1/19/2012		41.09	NE	<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	<0.00011	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	<0.0001	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	<0.0001	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	<0.0001	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	<0.0001	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	<0.00011	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	<0.00011	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
P-56	P56-ROX-102711	10/27/2011	40.82 - 65.82	39.42	NE	<0.0001	0.00039	<0.0052		<0.0001	<0.0052	0.016	0.0224	<0.01	<0.01	<0.01	<0.0052	<0.0052	<0.0052	<0.01	0.0011	<0.0052	<0.0001
	P56-ROX-011912	1/19/2012		41.81	NE	<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	<0.0001	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	<0.0001	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	<0.0001	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	<0.0001	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	<0.00011	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	<0.00011	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	<0.00011	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	40.82 - 65.82	46.35	NE	<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
P-57	P57-ROX-110811	11/8/2011	40.46 - 65.46	39.20	NE	<0.00054	0.00076	<0.0054		<0.00054	<0.0054	0.0288	0.0388	<0.011	<0.011	<0.011	<0.0054	<0.0054	<0.0054	<0.011	0.0006	0.286	<0.00054
	P57-ROX-021312	2/13/2012		42.13	NE	<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	<0.0001	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	<0.0001	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	<0.0001	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	<0.0001	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	<0.00012	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	<0.0001	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	40.46 - 65.46	43.38	NE	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	<0.00011	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	40.46 - 65.46	46.57	NE	<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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-58	P58-ROX-102811	10/28/2011	40.21 - 65.21	37.31	NE	<0.000097	0.0016	<0.0049		<0.000097	<0.0049	0.049	0.0717	<0.0097	0.0347	<0.0097	<0.0049	<0.0049	<0.0049	<0.0097	0.00085	0.137	0.00012
	P58-ROX-011912	1/19/2012		39.73	NE	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	0.000052 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	<0.0001	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	<0.0001	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	0.000068 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	0.000066 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	<0.00011	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	0.00024	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	0.00019	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	0.000071 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	0.000066 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	40.21 - 65.21	44.66	NE	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
P-59	P59-ROX-102711	10/27/2011	47.91 - 72.91	41.06	NE	0.00035	0.0012	<0.0053		<0.00011	<0.0053	0.0121	0.0184	<0.011	<0.011	<0.011	<0.0053	<0.0053	<0.0053	<0.011	0.002	0.0383	0.00057
	P59-ROX-011912	1/19/2012		42.88	NE	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	0.000073 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	0.000062 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	0.00015	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	0.000063 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	0.000066 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	<0.000079 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	0.000077 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	0.000078 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	0.000061 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	0.00015	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	47.91 - 72.91	47.35	NE	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
P-66	P66-ROX-110111	11/1/2011	34.72 - 59.72	28.92	NE	0.00017	0.003	<0.005		<0.0001	<0.005	0.093	0.0295	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.0013	<0.005	0.00029
	P66-ROX-051012	5/10/2012		32.48	NE	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	0.000082 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	<0.000051 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	0.000076 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	0.000072 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	<0.00019 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	0.000052 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	34.72 - 59.72	36.39	NE	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

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-74	P74-ROX-103111	10/31/2011	44.43 - 69.43	36.26	NE	<0.0001	0.00044	<0.005		<0.0001	<0.005	0.0177	0.0265	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00025	0.0127	<0.0001
	P74-ROX-011912	1/19/2012		38.77	NE	<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	<0.0001	<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	<0.0001	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	<0.0001	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	0.000038 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	<0.0001	<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	0.00014	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	0.00015	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	44.43 - 69.43	43.28	NE	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
P-93A	P93A-ROX-050511	5/5/2011	48.17 - 63.17	41.88	NE	0.000019 J J	0.00044 J	<0.005		<0.0001 UJ	<0.005	0.0172 J	0.0309 J	<0.01	0.0075 J	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	0.0004 J	0.21	0.000026 J
	P93A-ROX-081811	8/18/2011		39.40	NE	<0.000033 U	0.00047	<0.005		<0.0001	<0.005	0.0224	0.0302	<0.01	0.0093 J	<0.01	<0.005	<0.005	<0.005	<0.01	0.00043	0.183	0.000037 J
	P93A-ROX-102611	10/26/2011		39.43	NE	<0.0001	0.00033	<0.005		<0.0001	<0.005	0.0162	0.0258	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	0.00032	0.193	<0.0001
	P93A-ROX-012012	1/20/2012		41.66	NE	<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	<0.0001	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	<0.00011	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	<0.0001	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	<0.0001	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	<0.0001	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	<0.0001	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	0.000046 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	<0.0001	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	<0.00011	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	<0.0001	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	48.17 - 63.17	46.53	NE	<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
P-93B	P93B-ROX-050511	5/5/2011	74.60 - 76.60	41.96	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	<0.0002 UJ	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	0.000017 J J	0.0933	<0.0001
	P93B-ROX-081811	8/18/2011		39.44	NE	<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	0.116	<0.0001
	P93B-ROX-102611	10/26/2011		39.48	NE	<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	0.122	<0.0001
	P93B-ROX-012012	1/20/2012		41.72	NE	<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	<0.0001	<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	<0.00011	<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		44.98	NE	<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		44.98	NE	<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	0.00013	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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.0001	<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	74.60 - 76.60	46.58	NE	<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	<0.0001	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs																
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-93C	P93C-ROX-050611	5/6/2011	94.26 - 96.26	41.84	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.00009 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	0.0144	<0.0001
	P93C-ROX-081811	8/18/2011		39.32	NE	<0.0001	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.000033 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	0.0046 J	<0.0001
	P93C-ROX-102611	10/26/2011		39.36	NE	<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-012012	1/20/2012		41.57	NE	<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	<0.00011	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	94.26 - 96.26	46.44	NE	<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
P-93D	P93D-ROX-050511	5/5/2011	125.75 - 127.75	41.96	NE	<0.0001 UJ	<0.0001 UJ	<0.005		<0.0001 UJ	<0.005	<0.005 UJ	0.000045 J J	<0.01	<0.01	<0.01	<0.005 UJ	<0.005	<0.005	<0.01	<0.00005 UJ	<0.005	<0.0001
	P93D-ROX-081811	8/18/2011		39.46	NE	<0.000023 U	<0.0001	<0.005		<0.0001	<0.005	<0.0002	<0.000042 U	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.00005	<0.005	0.000021 J
	P93D-ROX-102711	10/27/2011		39.59	NE	<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
	P93D-ROX-012012	1/20/2012		41.77	NE	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	0.000087 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	125.75 - 127.75	46.62	NE	<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
P-114	P114-ROX-102811	10/28/2011	32.67 - 52.67	24.73	NE	<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	<0.0048	<0.000095
	P114-ROX-012012	1/20/2012		27.17	NE	<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	<0.0001	<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	<0.0001	<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	<0.0001	<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	<0.00011	<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	<0.0001	<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	<0.00011	<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	<0.00011	<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	<0.00011	<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	32.67 - 52.67	32.11	NE	<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

TABLE 3
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

						SVOCs															
						Fluoranthene	Fluorene	Hexachlorobenzene	Indene[6]	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)	0.28 [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]		0.0035 [2]	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-3-PZ	ROST3PZ-ROX-051412	5/14/2012	40.00 - 50.00	38.82	NE	<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	<0.00011	<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	<0.00011	<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	<0.0001	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				<0.00011	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		0.00043					0.0105 J	0.0142								0.00073		<0.000044 U
	ROST3-MW-ROX-100913	10/9/2013		40.16	NE	<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	37.81 - 47.81	42.20	NE	<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
ROST-4-PZ(C)	ROST4PZ-C-051412	5/14/2012	34.95 - 44.95	39.04	NE	<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	<0.000041 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
	ROST4PZC-ROX-102912	10/29/2012		40.75	NE	<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	<0.00011	<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	<0.00011	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	0.000099 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	<0.00011	<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	34.95 - 44.95	40.97	NE	<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
T-12	T12-ROX-102711	10/27/2011	46.46 - 72.46	38.54	NE	<0.0001	0.0006	<0.0051		<0.0001	<0.0051	0.0264	0.0415	<0.01	<0.01	<0.01	<0.0051	<0.0051	<0.0051	<0.01	0.0015	0.0167	0.0001
	T12-ROX-011912	1/19/2012		41.0	NE	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	<0.0001	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	0.000046 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	<0.0001	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	<0.00011	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	<0.0001	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	0.000044 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	<0.00011	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	46.46 - 72.46	45.26	NE	<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

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 I Tables).
4 Beginning in 4Q12, naphthalene was analyzed via 8260 VOC, and prior historic results were reported by PAH analysis.
5 Beginning in 4Q13, professional judgement criteria used to review common laboratory contaminants were reevaluated. Acetone, 2-butanone, and methylene chloride are only U-qualified when present in the method blank.
6 The laboratory was 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.
R	Indicates current quarter analyte result was rejected.
NA	Indicates current quarter analyte 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.

URS QUALIFIERS

J = The result is estimated.
UJ = Estimated non-detect.
U = Result is non-detect.

The following EVS Descriptions and Assumptions apply to **Figure 6.** C Tech Development Corporation's Environmental Visualization System PRO, Version 9.52 (EVS-PRO) was used to model the estimated distribution of benzene in the groundwater.

EVS Descriptions and Assumptions:

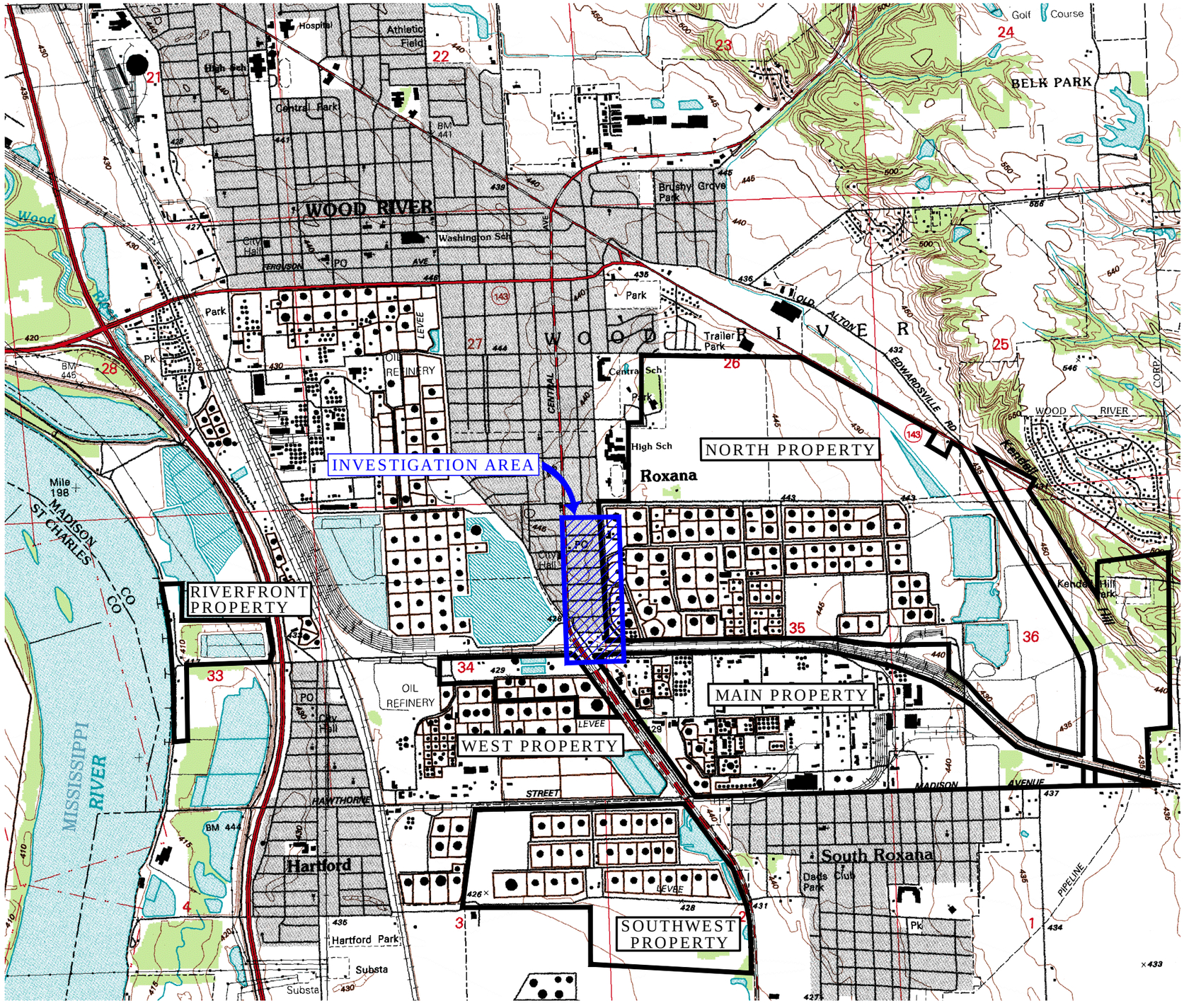
Plan View Model Output – The data input for the plan view model was not limited by depth and was modeled in two dimensions (2D). Regardless of sample depth, benzene concentrations were modeled on a flat horizontal plane.

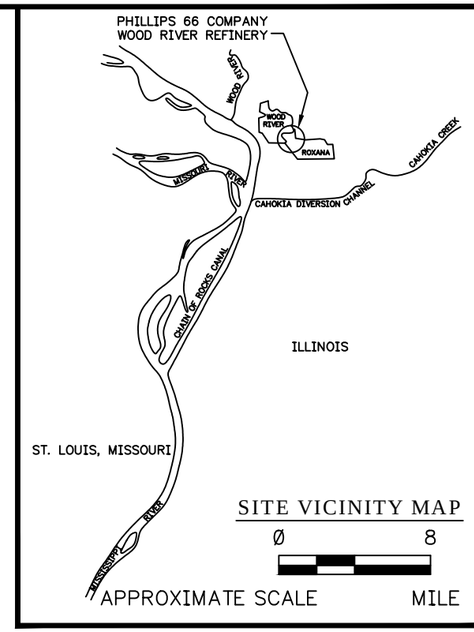
Inward Kriging / Boundary Cut-off – This method of Kriging limits the horizontal extent of data modeling to the extent of the data on the x/y plane in a convex hull.

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 2ØØØ

APPROXIMATE SCALE MILE

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd April 2Ø14 DSGN. BY: djd CHKD. BY: b3	1Q14 Investigation Area Location Map	FIG. NO. 1

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US - 2014\3-ROXANA\10-GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIG 1 INVESTIGATION AREA LOCATION MAP.DWG Last edited: 04/01/14 @ 1:07 p.m. @ WCC-ST.LOUIS

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 2 GROUNDWATER MONITORING WELL SAMPLING LOCATIONS.DWG Last edited: APR. 01, 14 @ 1:08 p.m. by: david_deguire

LEGEND

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

NOTE:
* INDICATES PERCHED GROUNDWATER MONITORING WELLS.

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
P-55
ROST-4-PZ(A)
ROST-4-PZ(B)
ROST-4-PZ(C)
ROST-4-PZ
ROST-4-PZ(D)
ROST-3-MW
ROST-4-PZ(E)
ROST-4-PZ(F)
ROST-4-PZ(G)
P-60-S
P-60-12
*P-60-12S
A-28
T-24
P-68
A-33
MW-11
P-54
* ROST-5-PZ
P-60-13
*P-60-13S
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-21
P-57
MW-4
MW-3
P-93A
P-93B
P-93C
P-93D
P-73
MW-7
MW-5
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

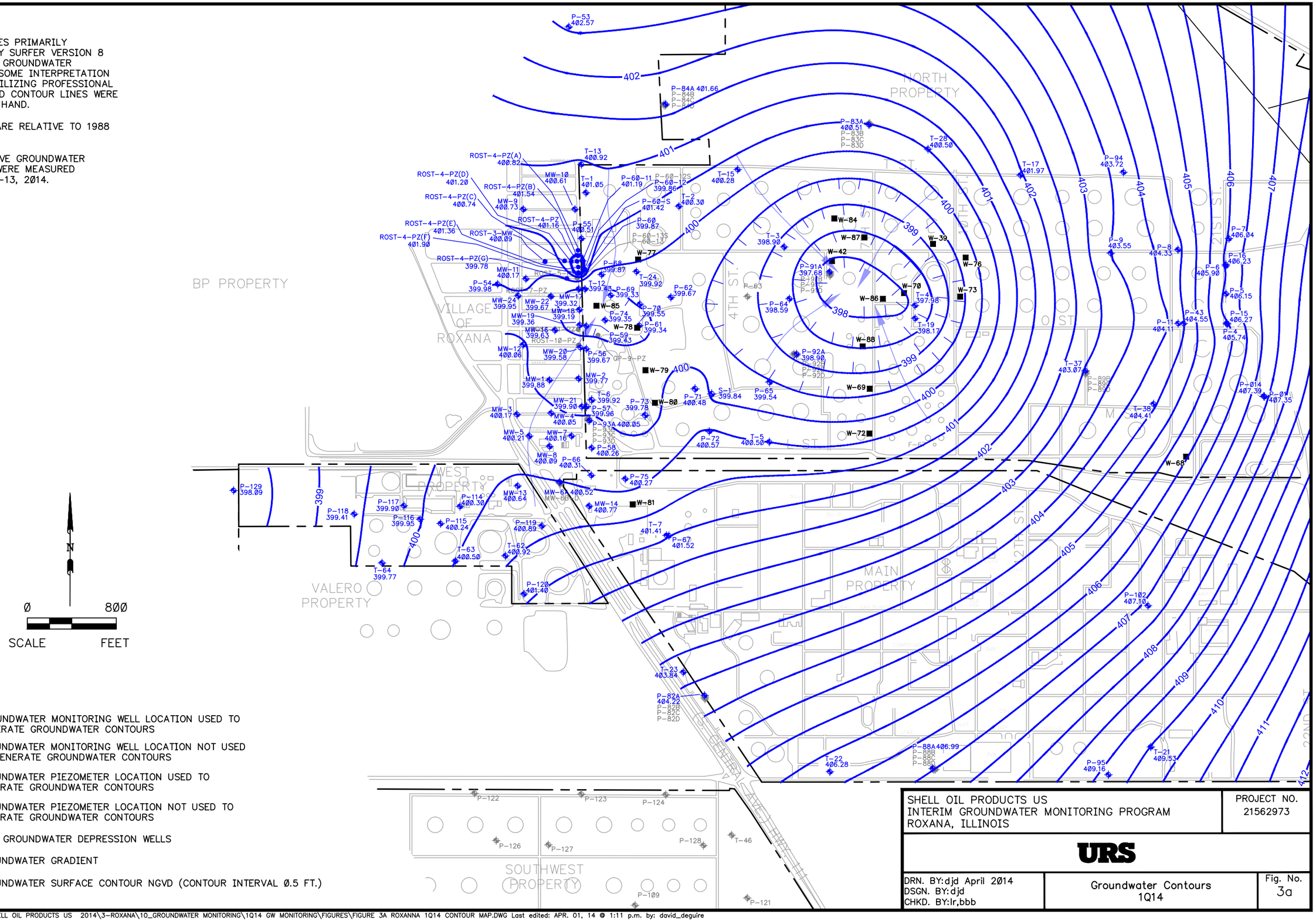
SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY:djd April 2014 DSGN. BY:lr CHKD. BY:b3	1Q14 Groundwater Monitoring Well Sampling Locations	FIG. NO. 2

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 FEBRUARY 10–13, 2014.



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 DEPRESSION WELLS
- GROUNDWATER GRADIENT
- 407 GROUNDWATER SURFACE CONTOUR NGVD (CONTOUR INTERVAL 0.5 FT.)

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY:djd April 2014
DSGN. BY:djd
CHKD. BY:lr,bbb

Groundwater Contours 1Q14

Fig. No. 3a

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 3A ROXANNA 1Q14 CONTOUR MAP.DWG Last edited: APR. 01, 14 @ 1:11 p.m. by: david_deguire

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 3B ROXANA 1Q14 CONTOUR MAP.DWG Last edited: APR. 01, 14 @ 1:13 p.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
- 404 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 FEBRAURY 10–13, 2014.

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
BP
PUBLIC WORKS YARD
1986 APPROXIMATE BENZENE RELEASE SITE

T-1 401.05
PZ-1(101)
PZ-1(85)
MW-10 400.61
MW-9 400.73
P-55 400.51
ROST-4-PZ(A) 400.82
ROST-4-PZ 401.16
ROST-4-PZ(B) 401.54
P-60-11 401.19
ROST-4-PZ(C) 400.74
ROST-4-PZ(D) 401.20
P-60 399.87
P-60-S
ROST-3-MW 400.09
ROST-4-PZ(E) 401.36
P-60-12 399.86
P-60-12S
ROST-4-PZ(F) 401.90
P-60-13
P-60-13S
MW-11 400.17
ROST-4-PZ(G) 399.78
P-68 399.87
T-24 399.92
P-54 399.98
ROST-5-PZ
T-12 399.43
MW-17 399.32
MW-22 399.67
ROST-7-PZ
P-69 399.33
P-70 399.55
MW-24 399.95
MW-18 399.19
P-74 399.35
MW-19 399.36
P-59 399.43
P-61 399.34
ROST-21-PZ
GP-9-PZ
MW-16 399.63
PZ-2(84)
PZ-2(70.5)
ROST-10-PZ
MW-12 400.06
MW-20 399.58
P-56 399.67
MW-1 399.88
MW-2 399.77
W-79
T-6 399.92
MW-21 399.90
P-57 399.96
MW-4 400.05
MW-3 400.17
P-93A 400.05
P-93B
P-93C
P-93D
P-73 399.78
MW-5 400.21
MW-8 400.09
MW-7 400.16
P-58 400.26
P-66 400.31
P-75 400.27
400.52 MW-6A
MW-6B
MW-6C
MW-6D
MW-13 400.64
P-114 400.30
MW-14 400.77
W-81
W-77
W-85
W-78
A-28
A-27
A-
400
400

Ø 200 SCALE FEET

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY:djd April 2014 DSGN. BY:lr CHKD. BY:bbb	Groundwater Contours 1Q14– West Fenceline	FIG. NO. 3b

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 4A THICKNESS OF LNAPL (WEST FENCLINE).DWG Last edited: APR. 01, 14 @ 1:15 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 LOCATION, LNAPL THICKNESS IN FEET
- GROUNDWATER PIEZOMETER SAMPLING 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 FEBRUARY 10–13, 2014.

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

P-84A P-84B P-84C P-84D
T-13 T-1 T-2
MW-9 MW-10
ROST-4-PZ(A) 0.10 P-55 0.13
ROST-4-PZ(B) ROST-4-PZ(D) ROST-4-PZ(C) 0.10 ROST-3-MW ROST-4-PZ(E) 0.02 0.01 ROST-4-PZ(G) ROST-4-PZ(F)
P-60-S 0.38 P-60-12 P-60-12S P-60-11 ROST-4-PZ R-77 T-24 2.25 1.00 A-28 P-68 0.11* 0.10 P-60 0.11 P-60-13 P-60-13S T-12 A-33
P-54 MW-11 MW-17 MW-24 MW-22 MW-18 MW-19 MW-16 MW-12 MW-20 MW-2 MW-1 MW-21 MW-3 MW-4 MW-5 MW-8 MW-7 MW-6 MW-13 MW-14
P-69 A-27 P-74 P-59 P-56 P-57 P-93A P-93B P-93C P-93D P-58 P-66 P-75
P-62 1.50 1.00 P-70
P-61 1.55* 1.00 R-78
R-79 R-80 R-81
P-71 0.01 S-1 0.01 P-72 P-73
T-6 T-7 P-67 0.03
P-117 P-114 P-116 P-115 P-119

0 300 SCALE FEET

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd April 2014 DSGN. BY: lr CHKD. BY: bbb	1Q14 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 SAMPLING LOCATION
- GROUNDWATER PIEZOMETER SAMPLING LOCATION NOT SAMPLED
- 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 WEST FENCE LINE AREA. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.
2. LNAPL THICKNESS WAS MEASURED DURING A COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON FEBRUARY 10–13, 2014.

BP PROPERTY

NORTH PROPERTY

SHELL OIL COMPANY PROPERTY

WEST PROPERTY

MAIN PROPERTY

VALERO PROPERTY

VILLAGE OF HARTFORD

ILLINOIS TERMINAL RAILROAD

RAND AVE.

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

4TH ST. 7TH ST. 10TH ST. 12TH ST. 21ST ST. 22ND ST.

ROUTE 1

REFERENCE: SHELL DRAWING E–36137–12

SCALE Ø 1ØØØ FEET

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd April 2Ø14 DSGN. BY: lr CHKD. BY: bbb	1Q14 Thickness of LNAPL	FIG. NO. 4b

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\1Q GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 4B THICKNESS OF LNAPL (REFINERY).DWG Last edited: APR. 01, 14 @ 1:15 p.m. by: david.deguire

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10 GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 5 4Q13 GROUNDWATER ANALYTICAL RESULTS SUMMARY.DWG Last edited: APR. 01, 14 @ 1:17 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
Ethylbenzene	0.7
MTBE	0.07
Naphthalene	0.14
Toluene	1
1,3,5-Trimethylbenzene	0.07
2,4-Dimethylphenol	0.14
2-Methylnaphthalene	0.028
Phenol	0.1

3. J = THE TARGET ANALYTE WAS DETECTED BELOW THE REPORTING LIMIT AND THE RESULT IS ESTIMATED.
4. MULTIPLE RESULTS (e.g., 721/724) INDICATE DUPLICATE 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 1Q14 DUE TO THE PRESENCE OF LNAPL.

MW-9 MW-10 SECOND ST P-55 NORTH PROPERTY

Sample Location	T-12
Sampled 1/24/14	Result (mg/L)
Benzene	2.48
Naphthalene	0.171
2-Methylnaphthalene	0.0326

ROST-4-PZ(A) ROST-4-PZ(B) ROST-4-PZ(C) ROST-4-PZ ROST-4-PZ(D) ROST-4-PZ(E) ROST-4-PZ(F) ROST-4-PZ(G) THIRD ST ROST-3-MW HIGHWAY 111 (S. CENTRAL AVE) P-60 P-68 A-28 T-24 A-33 MW-11 P-54 MW-17 T-12 MW-24 FOURTH ST MW-22 P-69 WOOD RIVER REFINERY

Sample Location	MW-22
Sampled 1/20/14	Result (mg/L)
Benzene	1.47 / 1.58
Ethylbenzene	3.17 / 3.4
Naphthalene	0.287 / 0.262
Toluene	5.33 / 5.71
1,3,5-Trimethylbenzene	0.298 / 0.398
2-Methylnaphthalene	0.0459 / 0.0416

MW-18 A-27 P-70

Sample Location	P-74
Sampled 1/24/14	Result (mg/L)
Benzene	4.45
1,3,5-Trimethylbenzene	0.11

P-74 MW-19 P-59 P-61 FIFTH ST MW-16

Sample Location	P-56
Sampled 1/22/14	Result (mg/L)
Benzene	0.0895

Sample Location	P-59
Sampled 2/3/14	Result (mg/L)
Benzene	15.9
Ethylbenzene	1.86
1,3,5-Trimethylbenzene	0.193
2,4-Dimethylphenol	0.147 J

MW-12 VILLAGE OF ROXANA MW-20 P-56 CHAFEER ST SIXTH ST

Sample Location	MW-2
Sampled 1/20/14	Result (mg/L)
Benzene	0.0238
1,3,5-Trimethylbenzene	0.156

MW-1 MW-2 BP

Sample Location	MW-4
Sampled 1/30/14	Result (mg/L)
Benzene	2.01

Sample Location	P-57
Sampled 2/3/14	Result (mg/L)
Benzene	261
2-Methylnaphthalene	0.0314
Phenol	0.168 J

SEVENTH ST T-6 MW-21 P-57

Sample Location	P93A	P93B
Sampled 1/29/14, 1/28/14	Result (mg/L)	Result (mg/L)
Benzene	136	242 / 293
Phenol	0.105	

MW-4 MW-3 P-93A P-93B P-93C P-93D P-73

Sample Location	MW-7
Sampled 1/30/14	Result (mg/L)
Benzene	1490

EIGHTH ST MW-5 MW-7

Sample Location	P-58
Sampled 2/3/14	Result (mg/L)
Benzene	496
Ethylbenzene	0.767 J
2-Methylnaphthalene	0.0474
Phenol	0.123 J

MW-8 P-58

1986 APPROXIMATE BENZENE RELEASE SITE

RAND AVENUE

Sample Location	MW-8
Sampled 1/30/14	Result (mg/L)
Benzene	721 / 748
MTBE	1.92 J / 1.99 J
Phenol	0.105 / 0.135

P-66 P-75

Sample Location	P-66
Sampled 1/29/14	Result (mg/L)
Benzene	0.008
2-Methylnaphthalene	0.0284

MW-13 MW-6A MW-6B MW-6C MW-6D WEST PROPERTY MAIN PROPERTY MW-14 P-114

N

Ø 200 SCALE FEET

SHELL OIL PRODUCTS US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY: djd April 2014
DSGN. BY: lr
CHKD. BY: bbb

1Q14 Groundwater Monitoring Well Analytical Exceedances

FIG. NO. 5

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIGURE 6 DISSOLVED PHASE BENZENE CONCENTRATIONS IN GROUNDWATER.DWG Last edited: APR. 01, 14 @ 1:18 p.m. by: david_deguire

LEGEND

- GROUNDWATER MONITORING WELL SAMPLING LOCATION
- GROUNDWATER MONITORING WELL LOCATION NOT SAMPLED
- GROUNDWATER MONITORING WELL LNAPL THICKNESS
- GROUNDWATER PIEZOMETER SAMPLING LOCATION
- 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)

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., <Ø.ØØØ5 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. 721/748) INDICATE DUPLICATE SAMPLES.

LNAPL THICKNESS WAS MEASURED DURING THE COMPREHENSIVE GROUNDWATER MONITORING GAUGING EVENT ON FEBRUARY 10-13, 2014. REFER TO TABLE 1 FOR GROUNDWATER GAUGING INFORMATION.

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

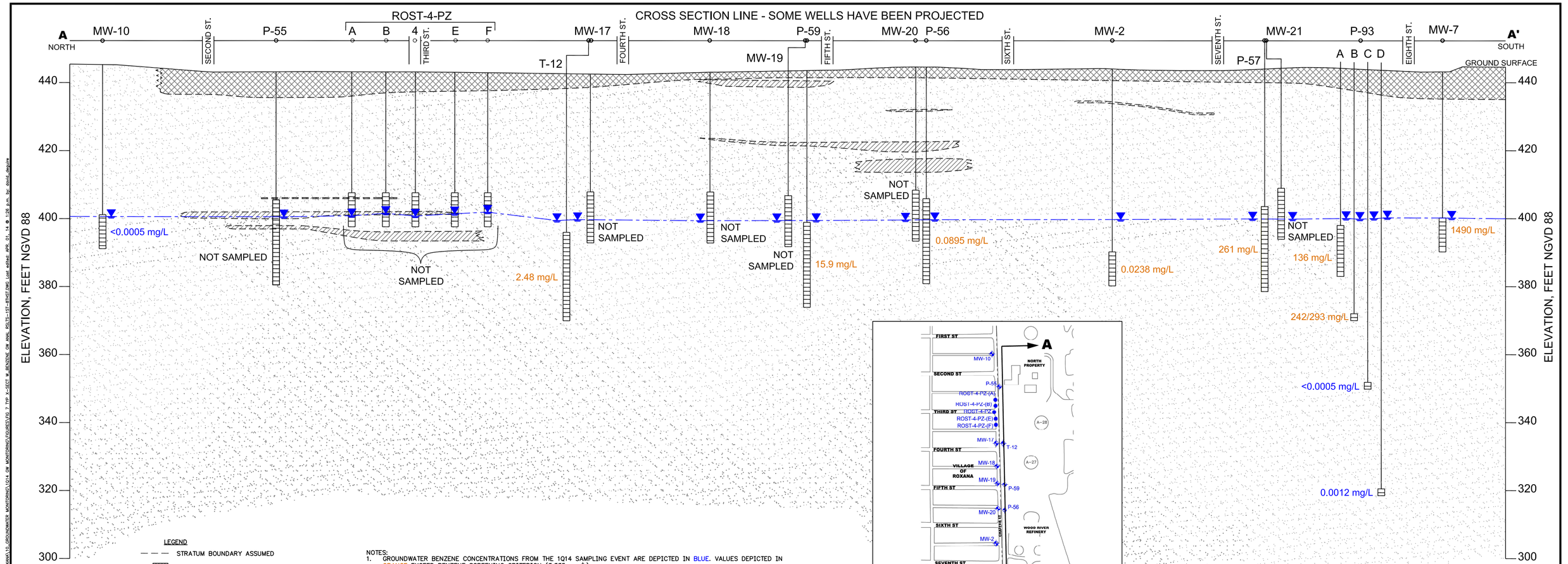
MW-9 <Ø.ØØØ5
MW-10 <Ø.ØØØ5
P-55 Ø.13
P-6Ø-11
ROST-4-PZ(A)
ROST-4-PZ(C) Ø.ØØ15
ROST-4-PZ
ROST-3-MW Ø.ØØ4
ROST-4-PZ(E) Ø.Ø2
P-6Ø-S Ø.38
P-6Ø Ø.11
ROST-4-PZ(F)
P-68 Ø.11*
A-28
T-24 2.25
MW-11 <Ø.ØØØ5
ROST-4-PZ(G)
P-54 <Ø.ØØØ5
MW-17
T-12 2.48
P-69
MW-24 <Ø.ØØØ5
MW-22 1.47/1.58
P-7Ø
A-27
MW-18
P-59 15.9
P-74 4.45
P-61 1.55*
MW-19
MW-16 <Ø.ØØØ5
MW-12 <Ø.ØØØ5
MW-20
P-56 Ø.Ø895
MW-1 <Ø.ØØØ5
MW-2 Ø.Ø238
T-6
MW-21
MW-3 <Ø.ØØØ5
MW-4 2.Ø1
P-57 261
P-93A 136
P-93B 242/293
P-93C <Ø.ØØØ5
P-93D Ø.ØØ12
MW-5 Ø.ØØ2
MW-7 149Ø
MW-8 721/748
P-58 496
P-75
MW-13 <Ø.ØØØ5
P-66 Ø.ØØ8
MW-6A <Ø.ØØØ5/<Ø.ØØØ5
MW-6B <Ø.ØØØ5
MW-6C <Ø.ØØØ5
MW-6D <Ø.ØØØ5
P-114 Ø.ØØ13
MW-14 <Ø.ØØØ5
P-116
P-115

0.005 0.05 0.5 5.0 50.0 500.0

SCALE Ø 2ØØ FEET

N

SHELL OIL PRODUCTS US INTERIM GROUNDWATER MONITORING PROGRAM ROXANA, ILLINOIS		PROJECT NO. 21562973
URS		
DRN. BY: djd April 2Ø14 DSGN. BY: nm/lr CHKD. BY: bbb	1Q14 Dissolved Phase Benzene Concentrations in Groundwater	FIG. NO. 6



SHELL OIL PRODUCT US
INTERIM GROUNDWATER MONITORING PROGRAM
ROXANA, ILLINOIS

PROJECT NO. 21562973

URS

DRN. BY: djd April 2014
DSGN. BY: lr
CHKD. BY: bbb

Cross-Section of Benzene 1Q14 Groundwater Analytical Results- Chaffer Street

FIG. NO. 7

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIG 7 TYP X-SECT W_BENZENE GW ANAL RESLTS-1ST-ETHST.DWG Last edited: APR 01, 14 @ 1:26 p.m. by: david_deguire

CROSS SECTION LINE - SOME WELLS HAVE BEEN PROJECTED

WEST
B

EAST
B'

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 NGVD 88

440
420
400
380
360
340
320
300

<0.0005/<0.0005 mg/L

<0.0005 mg/L

<0.0005 mg/L

<0.0005 mg/L

1490 mg/L

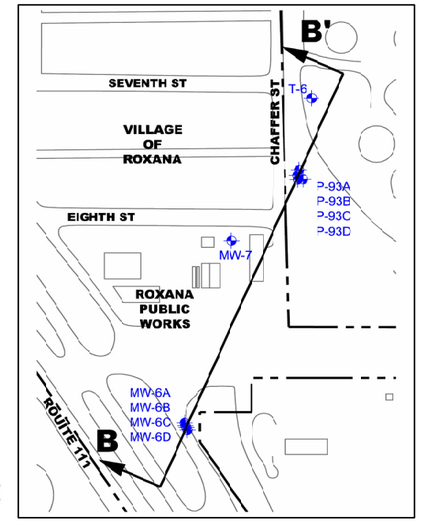
136 mg/L

NOT SAMPLED

242/293 mg/L

<0.0005 mg/L

0.0012 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

Ø 2Ø
VERTICAL SCALE FEET

Ø 1ØØ
HORIZONTAL SCALE FEET

NOTES:
1. GROUNDWATER BENZENE CONCENTRATIONS FROM THE 1Q14 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 FEBRUARY 1Ø-13, 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 April 2Ø14 DSGN. BY: lr CHKD. BY: wmp	Cross-Section of Benzene 1Q14 Groundwater Analytical Results- Roxana Public Works Yard
	FIG. NO. 8

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCTS US 2014\3-ROXANA\10_GROUNDWATER MONITORING\1Q14 GW MONITORING\FIGURES\FIG. 8 TYP X-SECT W_BENZENE GW ANAL RSLTS-HWY111-CHAFFER.DWG Last edited: APR. 01, 14 @ 1:21 p.m. by: david_deguire

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMattingly, L Rathnow

DATE: 1/14/14 WEATHER: partly cloudy, 45°F

MONITORING WELL ID: MW-1 SAMPLE ID: MW1-ROX-011414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.13 ft
Depth to Water (btoc): 42.33 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 48.80 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.80 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) = 53.60 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 : 935* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2804 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 36.1 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1413	42.33	Cloudy	none	6.74	1.186	91	-0.03	147.6	17.72
800	1415	42.33	Cloudy	none	6.74	1.188	44	0.06	136.6	17.94
2000	1418	42.33	Cloudy	none	6.75	1.191	26	0.05	81.65	18.04
2800	1420	42.33	Cloudy	none	6.76	1.192	17	0.04	63.69	18.04
3600	1422	42.33	Cloudy	none	6.76	1.195	11	0.02	68.01	18.04
4800	1425	42.33	Clear	none	6.77	1.197	7	0.01	25.02	18.16
5600	1427	42.33	Clear	none	6.77	1.198	4	0.01	11.67	18.13
6800	1430	42.33	Clear	none	6.77	1200	0	-0.00	10.49	18.16
7600	1432	42.33	Clear	none	6.77	1.203	-3	-0.01	9.969	18.29

Start Time: 1413 Elapsed Time (min): 20 Water Quality Meter ID & SN: TROLL 9500 - R24331

Stop Time: 1433 Average Purge Rate (mL/min): 400 Date Calibrated: 1/14/14

SAMPLING DATA

Sample Date: 1/14/14 Sample Time: 1435 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 7600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: L. Rathman, B. Hailemariam

DATE: 2-/13/14 WEATHER: Sunny 15°F

MONITORING WELL ID: MW-1 SAMPLE ID: MW1-ROX-021314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.13 ft
Depth to Water (btoc): 42.62 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 48.80 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.51 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) = 53.80 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: 0.0 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	0900	42.62	cloudy	none	6.68	1.196	8	0.14	3047.1	17.66
400	0907	42.62	cloudy	none	6.68	1.195	-15	0.13	176.4	17.68
2000	0910	42.62	cloudy	none	6.69	1.192	-24	0.13	152.2	17.71
1-05	+ flow	Pull Pump	flow cell	bore and	continue	to low Flo	w Sample	Co		
2000	0930	42.62	cloudy	none	6.70	1.205	-34	0.12	124.8	16.35
2800	0932	42.62	cloudy	none	6.73	1.208	-37	0.32	57.2.0	16.44
4000	0935	42.62	cloudy	none	6.74	1.209	-38	0.11	538.2	17.13
4500	0937	42.62	cloudy	none	6.73	1.210	-35	0.12	474.9	17.37
6000	0940	42.62	cloudy	none	6.73	1.209	-37	0.09	441.0	17.39
6400	0942	42.62	cloudy	none	6.73	1.207	-39	0.09	376.9	17.36
8000	0945	42.62	cloudy	none	6.73	1.207	-36	1.65	259.4	17.52
8400	0947	42.62	cloudy	none	6.74	1.208	-32	0.27	198.6	17.43
10000	0950	42.62	cloudy	none	6.73	1.205	-35	0.12	156.1	17.59
10800	0952	42.62	cloudy	none	6.73	1.204	-34	0.09	120.2	17.54
11600	0954	42.62	cloudy	none	6.73	1.206	-33	0.08	118.1	17.59
12800	0957	42.62	cloudy	none	6.73	1.209	-38	0.06	98.56	17.62

Start Time: 0905 Elapsed Time (min): 76 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: 1021 Average Purge Rate (mL/min): 400 Date Calibrated: 2/13/14

SAMPLING DATA

Sample Date: 2/13/14 Sample Time: 1025 Lab Analysis: ~~VOC~~, SVOC

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

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

COMMENTS:

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

Total Purge Volume: 23,000 mL

MW-1 p2 of 2

Purge Volume	Time	Color	Odor	pH	conductivity	ORP	DO	Turbidity	Temp.
13600	0959	cloudy	none	6.73	1.205	-39	0.06	108.9	17.61
14800	1002	cloudy	none	6.74	1.206	-39	0.06	93.23	17.57
15600	1004	cloudy	none	6.74	1.205	-38	0.07	46.22	17.43
16400	1006	cloudy	none	6.74	1.203	-38	0.07	30.86	17.31
17600	1009	cloudy	none	6.74	1.203	-38	0.06	31.04	17.64
18400	1011	clear	none	6.74	1.201	-38	0.04	24.58	17.72
19600	1014	clear	none	6.74	1.202	-38	0.03	23.61	17.65
20400	1016	clear	none	6.74	1.201	-38	0.03	18.53	17.62
21200	1018	clear	none	6.74	1.204	-38	0.04	17.15	17.58
23000	1021	clear	none	6.74	1.205	-38	0.05	17.14	17.67

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DMattingly, DChase

DATE: 1/20/14 **WEATHER:** Sunny, 45F

MONITORING WELL ID: MW-2 **SAMPLE ID:** MW2-ROX-012014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 60.20 ft
Depth to Water (btoc): 43.59 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 49.87 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 16.61 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) = 54.87 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: 0.1 ppm
Wellbore PID/FID Reading: 819 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)	Cond. (mS/cm) (+/-3%)	ORP (mV) (+/-20)	DO (mg/L) (+/-0.2 mg/L or +/-10%)	Turbidity (NTUs) (<10 or +/-10%)	Temp (°C) (+/- 0.2 °C)
0	1213	43.59	cloudy	HC	6.61	1204	-91	0.22	29.34	18.28
1200	1216	43.59	cloudy	HC	6.63	1209	-96	0.13	30.16	18.80
2400	1219	43.59	cloudy	HC	6.64	1217	-99	0.09	26.43	19.04
3200	1221	43.59	cloudy	HC	6.65	1222	-101	0.08	22.64	19.12
4000	1223	43.59	cloudy	HC	6.66	1239	-103	0.06	21.81	19.14
4800	1225	43.59	clear	HC	6.66	1239	-104	0.05	15.26	19.16
6000	1228	43.59	clear	HC	6.67	1245	-105	0.05	10.79	19.14
6800	1230	43.59	clear	HC	6.68	1251	-106	0.05	18.95	19.23
7600	1232	43.59	clear	HC	6.68	1254	-106	0.03	17.49	19.26
8800	1235	43.59	clear	HC	6.69	1256	-107	0.03	17.36	19.24

DAC

Start Time: 1213 Elapsed Time (min): 22 mins. Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1235 Average Purge Rate (mL/min): 400 Date Calibrated: 1/20/14

SAMPLING DATA

Sample Date: 1/20/14 Sample Time: 1240 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DMC

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 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DWeathington, LRathbun

DATE: 1/16/14 **WEATHER:** Cloudy, 40°F

MONITORING WELL ID: MW-3 **SAMPLE ID:** MW3-ROX-011614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.00 ft
Depth to Water (btoc): 29.37 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 34.67 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.63 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) = 39.607 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: 0.2 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1415	29.37	clear	none	6.95	1.687	-118	0.39	48.93	17.35
800	1417	29.37	clear	none	6.91	1.698	-119	0.15	34.27	17.58
1600	1419	29.37	clear	none	6.90	1.699	-121	0.07	23.86	17.80
2400	1421	29.37	clear	none	6.90	1.697	-122	0.03	19.85	17.90
3200	1424	29.37	clear	none	6.90	1.692	-124	0.02	10.59	17.95
4000	1426	29.37	clear	none	6.90	1.689	-125	0.01	10.38	17.99
5200	1428	29.37	clear	none	6.90	1.689	-125	0.01	8.242	18.04

DM

Start Time: 1415 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 - R24331

Stop Time: 1428 Average Purge Rate (mL/min): 400 Date Calibrated: 1/16/14

SAMPLING DATA

Sample Date: 1/16/14 Sample Time: 1430 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 5200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: L. Rathman, B. Hailemariam

DATE: 2/13/14 WEATHER: Sunny 40°F

MONITORING WELL ID: MW-3 SAMPLE ID: MW3-ROX-021314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.00 ft
Depth to Water (btoc): 29.75 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): 15.25 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) = 39.167 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	13:57	29.75	clear	none	7.03	1.3606	-130	1.30	14.41	18.03
800	13:59	29.75	clear	none	6.94	1.3608	-135	1.12	14.453	18.49
2000	14:02	29.75	clear	none	6.97	1.3555	-139	0.77	12.37	18.63
4800	14:04	29.75	clear	none	6.96	1.3551	-141	0.55	8.946	18.72
3600	14:06	29.75	clear	none	6.96	1.362	-142	0.38	6.334	18.605
4400	14:08	29.75	clear	none	6.96	1.367	-143	0.28	6.232	18.60
5200	14:10	29.75	clear	none	6.95	1.373	-143	0.24	6.557	18.603

Start Time: 13:57 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: 14:10 Average Purge Rate (mL/min): 400 Date Calibrated: 2/13/14

SAMPLING DATA

Sample Date: 2/13/14 Sample Time: 14:15 Lab Analysis: ~~VOC~~, SVOC

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

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

COMMENTS:

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

Total Purge Volume: 5200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: L. Rathnow / K. Hurst

DATE: 1/30/14 | WEATHER: Partly Cloudy 25°F

MONITORING WELL ID: MW-4 | SAMPLE ID: MW-4-Rox - 013014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.39 ft
Depth to Water (btoc): ~~40.77~~ ft
Depth to LNAPL/DNAPL (btoc): NF ft
Depth to Top of Screen (btoc): 46.06 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.62 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) = 51.06 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: 0.0 ppm
Wellbore PID/FID Reading: 65.6 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	9:02	40.77	Clear	~~Hydrocarbon~~ Strong	6.78	1469	-85	0.12	107.6	17.18
800	9:04				6.79	1470	-94	0.07	88.92	17.46
1600	9:07				6.81	1470	-100	0.04	57.91	17.63
2400	9:09				6.82	1470	-104	0.03	41.14	17.71
3200	9:11				6.82	1468	-106	0.02	29.54	17.74
4000	9:14				6.82	1468	-108	0.01	21.67	17.80
4800	9:16				6.83	1467	-110	0.01	19.28	17.83
5600	9:18				6.84	1464	-111	0.01	15.29	17.83
6400	9:21				6.84	1462	-112	0.00	14.13	17.77
7200	9:23				6.84	1461	-113	-0.01	30.47	17.81
8000	9:25				6.84	1457	-113	-0.01	7.343	17.80

mS/cm YSI

KWH

Start Time: 9:02 | Elapsed Time (min): 23 min | Water Quality Meter ID & SN: TROLL 9500 - Q24337

Stop Time: 9:25 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/30/14

SAMPLING DATA

Sample Date: 1/30/14 | Sample Time: 930 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: KH

COMMENTS:

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

Total Purge Volume: 8000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D. Chase / D. Matthews

DATE: 1-17-14 WEATHER: 17°F cloudy, windy

MONITORING WELL ID: MW-5 SAMPLE ID: MW5-ROX-011713

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.30 ft
Depth to Water (btoc): 29.21 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 33.97 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 15.09 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) = 38.97 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1501	29.21	gray	HC	7.00	1.111	-91	0.40	496.0	15.64
1200	1504	29.21	gray	HC	6.91	1.113	-98	0.21	415.8	16.71
2000	1506	29.21	gray	HC	6.87	1.116	-102	0.11	365.0	17.19
3200	1509	29.21	gray	HC	6.85	1.119	-105	0.09	342.1	17.34
4000	1511	29.21	gray	HC	6.84	1.121	-107	0.06	291.9	17.52
4800	1513	29.21	gray	HC	6.83	1.124	-109	0.05	286.4	17.63
5600	1515	29.21	gray	HC	6.83	1.128	-111	0.04	209.5	17.70
6400	1517	29.21	gray	HC	6.82	1.132	-113	0.03	103.2	17.76
7200	1519	29.21	gray	HC	6.82	1.136	-114	0.02	63.97	17.79
8000	1521	29.21	gray	HC	6.82	1.138	-115	0.01	54.91	17.73
9200	1524	29.21	gray	HC	6.82	1.139	-116	0.02	41.76	17.75
10000	1526	29.21	gray	HC	6.82	1.141	-117	0.01	31.12	17.74
10800	1528	29.21	gray	HC	6.82	1.141	-117	0.02	33.12	17.74
11600	1530	29.21	gray	HC	6.82	1.142	-118	0.01	29.28	17.78
12400	1532	29.21	gray	HC	6.82	1.142	-118	0.01	28.11	17.73
13200	1534	29.21	gray	HC	6.82	1.142	-119	0.00	28.73	17.75

Start Time: 1501 Elapsed Time (min): 33 Water Quality Meter ID & SN: TROLL 9500 – R24331 DAC

Stop Time: 1534 Average Purge Rate (mL/min): 400 Date Calibrated: 1-17-14

SAMPLING DATA

Sample Date: 1-17-14 Sample Time: 1540 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: EB @ 1250

VOA Vials, No Headspace ☑ Initials: DC DM

COMMENTS:

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

Total Purge Volume: 13200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMcKnight, LRathmon

DATE: 1/16/14 WEATHER: cloudy, 32°F

MONITORING WELL ID: MW-6A SAMPLE ID: MW6A-ROX-011614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.16 ft
Depth to Water (btoc): 31.03 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): 14.13 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) = 39.83 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: 0.0 ppm
Wellbore PID/FID Reading: 0.7 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1130	31.03	Cloudy	none	6.83	1.481	-99	0.41	102.8	16.25
1200	1133	31.03	Cloudy	none	6.74	1.461	-104	0.14	96.37	16.92
2000	1135	31.03	Cloudy	none	6.72	1.431	-106	0.07	126.8	17.33
2800	1137	31.03	Cloudy	none	6.71	1.410	-108	0.03	94.20	17.52
3600	1139	31.03	Cloudy	none	6.71	1.404	-109	0.00	122.0	17.64
4400	1141	31.03	cloudy	none	6.71	1.413	-110	-0.00	103.8	17.72
5600	1144	31.03	cloudy	none	6.71	1.433	-111	-0.02	75.95	17.74
6400	1146	31.03	cloudy	none	6.72	1.446	-111	-0.03	69.66	17.75
7200	1148	31.08	cloudy	none	6.72	1.449	-112	-0.03	48.18	17.75
8000	1150	31.08	cloudy	none	6.72	1.455	-113	-0.04	52.73	17.81
8800	1152	31.08	cloudy	none	6.72	1.452	-113	-0.03	29.68	17.84
9600	1154	31.08	clear	none	6.72	1.445	-113	-0.04	26.17	17.89
10800	1157	31.08	clear	none	6.72	1.437	-113	-0.04	19.87	17.86
11600	1159	31.08	clear	none	6.72	1.429	-113	-0.05	15.80	17.88
12400	1201	31.08	clear	none	6.72	1.423	-114	-0.05	12.37	17.90
13200	1203	31.08	clear	none	6.72	1.421	-114	-0.05	13.04	17.85

Start Time: 1130 Elapsed Time (min): 37 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1207 Average Purge Rate (mL/min): 400 Date Calibrated: 1/16/14

SAMPLING DATA

Sample Date: 1/16/14 Sample Time: 1210 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 14800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 Groundwater Sampling **PROJECT NUMBER:** 215629.73.03001 **FIELD PERSONNEL:** D Mattingly, L Rathnow

DATE: 1/16/14 **MONITORING WELL ID:** MW6A-ROX-011614

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
14000	1205	31.03	clear	none	6.72	1.418	-114	-0.06	10.68	17.87
14800	1207	31.03	clear	none	6.72	1.418	-114	-0.06	8.637	17.88

DM

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DMathngly, LRathnow

DATE: 1/16/14 **WEATHER:** cloudy, 32°F

MONITORING WELL ID: MW-6B **SAMPLE ID:** MW6B-ROX-D11614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 69.38 ft
Depth to Water (btoc): 31.08 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 64.05 ft
Screen Length): 5 ft 25 (5

Water Column Height (do not include LNAPL or DNAPL): 38.30 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) = 66.55 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 : 1001* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3004 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1033	31.08	Cloudy	none	7.11	1.200	-75	0.55	374.1	16.13
1200	1036	31.08	Cloudy	none	7.02	1.207	-78	0.23	388.1	16.50
2400	1039	31.08	Cloudy	none	6.98	1.210	-80	0.13	389.7	16.80
3600	1041	31.08	Cloudy	none	6.97	1.213	-82	0.08	56.84	16.86
4400	1043	31.08	Cloudy	none	6.96	1.217	-84	0.06	42.78	17.01
5600	1046	31.08	Cloudy	none	6.96	1.219	-85	0.04	31.56	17.08
6400	1048	31.08	Clear	none	6.96	1.220	-86	0.02	16.21	17.11
7600	1051	31.08	Clear	none	6.96	1.221	-87	0.01	16.55	17.14
8800	1054	31.08	Clear	none	6.96	1.221	-88	0.01	17.54	17.14

DM

Start Time: 1033 Elapsed Time (min): 21 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1054 Average Purge Rate (mL/min): 400 Date Calibrated: 1/16/14

SAMPLING DATA

Sample Date: 1/16/14 Sample Time: 1100 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: DM

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 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMcKinley, LRathbun

DATE: 1/16/14 WEATHER: Mostly cloudy, 32°F

MONITORING WELL ID: MW-6C SAMPLE ID: MW6C-ROX-011614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 90.28 ft
Depth to Water (btoc): 30.88 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 84.95 ft
Screen Length): 5 ft

Water Column Height (do not include LNAPL or DNAPL): 59.40 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) = 87.45 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: 2.0 ppm
Wellbore PID/FID Reading: 31.8 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0932	30.88	cloudy	none	7.23	1.097	-94	2.29	62.42	15.52
1200	0935	30.88	cloudy	none	7.09	1.128	-103	1.34	88.07	16.22
2400	0938	30.88	cloudy	none	7.05	1.133	-108	0.35	69.69	16.57
3600	0941	30.88	clear	none	7.04	1.141	-111	0.07	42.01	16.71
4800	0944	30.88	clear	none	7.03	1.148	-113	0.04	28.02	16.75
6000	0947	30.88	clear	none	7.03	1.153	-114	0.02	21.09	16.79
6800	0949	30.88	clear	none	7.03	1.154	-115	0.02	14.31	16.84
8000	0952	30.88	clear	none	7.03	1.153	-116	0.01	10.03	16.88
9200	0956	30.88	clear	none	7.03	1.152	-117	-0.01	8.708	17.05
10400	0958	30.88	clear	none	7.03	1.152	-117	-0.02	7.286	17.15
11600	1001	30.88	clear	none	7.03	1.153	-118	-0.02	6.792	17.02

Start Time: 0932 Elapsed Time (min): 29 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1001 Average Purge Rate (mL/min): 400 Date Calibrated: 1/16/14

SAMPLING DATA

Sample Date: 1/16/14 Sample Time: 1005 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DMc

COMMENTS:

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

Total Purge Volume: 11600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: TMathudy, L Rathnow

DATE: 1/16/14 WEATHER: Mostly cloudy, 34°F

MONITORING WELL ID: MW-6D SAMPLE ID: MW6D-ROX-011614

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 110.05 ft
Depth to Water (btoc): 30.75 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): 79.30 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) = 107.22 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 : 1230* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 3690 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0832	30.75	Cloudy	None	6.85	1.401	-99	0.07	456.5	16.00
1200	0835	30.75	Cloudy	none	6.97	1.403	-118	0.07	616.5	16.50
2400	0838	30.75	Cloudy	none	7.03	1.409	-124	0.05	363.6	16.70
3600	0841	30.75	Cloudy	none	7.05	1.416	-125	0.03	219.4	16.76
4800	0844	30.75	Cloudy	none	7.06	1.420	-126	0.02	176.1	16.81
6000	0847	30.75	Cloudy	none	7.07	1.423	-126	0.01	186.8	16.71
7200	0850	30.75	Cloudy	none	7.07	1.424	-126	-0.00	181.2	16.82
8400	0854	30.75	Cloudy	none	7.07	1.425	-127	-0.01	184.3	16.83
10400	0858	30.75	Cloudy	none	7.08	1.425	-127	-0.02	204.8	16.85
11600	0901	30.75	Cloudy	none	7.08	1.424	-127	-0.02	24.10	16.88
12800	0904	30.75	Clear	None	7.08	1.424	-127	-0.02	6.801	16.88

DM

Start Time: 0832 Elapsed Time (min): 32 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 0904 Average Purge Rate (mL/min): 400 Date Calibrated: 1/16/14

SAMPLING DATA

Sample Date: 1/16/14 Sample Time: 0910 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: DM

COMMENTS:

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

Total Purge Volume: 12.800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** L. Dathnow / K. Hurst

DATE: 1/30/14 **WEATHER:** Partly Cloudy, 25°F, Windy

MONITORING WELL ID: MW-7 **SAMPLE ID:** MW-7-Rox-013014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.92 ft
Depth to Water (btoc): 42.63 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): 9.29 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: 0.0 ppm
Wellbore PID/FID Reading: 315.6 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. ~~(mS/cm)~~ 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	1050	42.63	Clear	Strong	~~6.45~~ 7.08	1556	-116	~~0.42~~ 1.94	~~4.065~~ 12.17	~~16.00~~ 16.27
	10				7.08	1556	-116			
* 0	1256	42.63	clear	strong	7.29	1543	-136	1.05	54.01	14.33
1200	1259	42.63			7.04	1552	-133	0.44	55.57	16.76
2000	1301	42.63			6.94	1556	-133	0.20	60.92	17.71
2800	1303	42.63			6.90	1558	-136	0.13	54.14	17.93
4000	1306	42.63			6.88	1558	-138	0.11	47.64	18.01
4800	1308	42.63			6.88	1563	-141	0.12	36.18	18.10
5600	1310	42.63			6.87	1566	-143	0.12	33.67	18.07
6800	1313	42.63			6.88	1570	-146	0.14	19.52	18.23
7600	1315	42.63			6.88	1569	-149	0.17	13.20	18.13
8400	1317	42.63			6.88	1569	-151	0.22	9.442	18.29

KWH

Start Time: ~~1021~~ KH 1256 Elapsed Time (min): 24 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: KH ~~1320~~ 1317 Average Purge Rate (mL/min): 400 Date Calibrated: 1/30/14

SAMPLING DATA

Sample Date: 1/30/14 Sample Time: 1320 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: KH

COMMENTS:

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

1025- lost connection with Troll. HAD TO replace Batteries in Troll. Restarted sample at 1050.
1256- restart again with new rugged reader

Total Purge Volume: 8400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: L. Rathnaw, K. Hurst

DATE: 1/30/14 | WEATHER: 40°F Cloudy, Windy

MONITORING WELL ID: MW-8 | SAMPLE ID: MW8-ROX-013014

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 43.60 ft
Depth to Water (btoc): 33.60 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): 10.00 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) = 38.60 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 : 845* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2536 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 10.4 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	13:47	33.64	clear	strong	6.70	1.752	-103	0.41	4.577	16.45
800	13:49	33.64	clear	strong	6.63	1.755	-110	0.24	5.779	17.14
1600	13:51	33.65	clear	strong	6.61	1.751	-115	0.18	6.050	17.59
2800	13:54	33.65	clear	strong	6.59	1.744	-119	0.15	10.08	17.92
3600	13:56	33.64	clear	strong	6.59	1.744	-123	0.13	11.46	18.00
4400	13:58	33.64	clear	strong	6.59	1.741	-125	0.12	14.72	18.05
5200	14:00	33.64	clear	strong	6.59	1.740	-128	0.13	10.33	18.14
6000	14:02	33.64	clear	strong	6.59	1.741	-130	0.11	8.773	18.12

Start Time: 1347 | Elapsed Time (min): 15 | Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1402 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/30/14

SAMPLING DATA

Sample Date: 1/30/14 | Sample Time: 1405 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: KAR

COMMENTS:

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

Total Purge Volume: 6000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMattingly, L. Rathmon

DATE: 1/14/14 WEATHER: Partly cloudy, 45°F

MONITORING WELL ID: MW-9 SAMPLE ID: MW9-ROX-011414, MW9-ROX-011414-EB

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.78 ft
Depth to Water (btoc): 44.03 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 46.45 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 12.75 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) = 51.45 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: 0.0 ppm
Wellbore PID/FID Reading: 0.6 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1518	44.03	colorless	none	6.89	1304	-22	0.30	11.61	16.41
800	1520	44.03	colorless	none	6.84	1316	-35	0.13	5.049	16.70
1600	1522	44.03	colorless	none	6.82	1318	-44	0.07	2.207	16.95
2800	1525	44.03	colorless	none	6.82	1320	-49	0.04	0.7731	17.07
3600	1527	44.03	colorless	none	6.82	1322	-54	0.02	0.1886	17.06

Start Time: 1518 Elapsed Time (min): 10 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1528 Average Purge Rate (mL/min): 400 Date Calibrated: 1/14/14

SAMPLING DATA

Sample Date: 1/14/14 Sample Time: 1530 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials:

COMMENTS:

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

Total Purge Volume: 3600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: L. Rathnow, B. Haikemaria

DATE: 2/13/14 WEATHER: Sunny 20°F

MONITORING WELL ID: MW-9 SAMPLE ID: MW9-ROX-021314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 56.78 ft
Depth to Water (btoc): 44.27 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 46.45 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 12.51 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) = 51.45 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: 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)~~ µS/cm	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
1	0	1131	44.27	clear	none	6.76	1291	-65	0.39	11.93	18.2
2	1200	11:34	〃	〃	〃	6.75	1300	-69	0.30	6.068	18.4
3	2000	11:36	〃	〃	〃	6.74	1309	-74	0.19	3.217	19.6
4	2,800	11:38	〃	〃	〃	6.73	1310	-78	0.11	3.861	19.0
5	4,000	11:41	〃	〃	〃	6.73	1309	-80	0.06	5.135	18.7
6	4,800	11:43	〃	〃	〃	6.74	1309	-82	0.02	10.88	18.1
7	5,600	11:45	〃	〃	〃	6.74	1307	-83	0.04	16.17	17.8
8	6400	11:46	〃	〃	〃	6.73	1307	-84	0.06	2.855	18.4
9	7600	11:49	〃	〃	〃	6.73	1312	-85	0.08	1.253	18.6
10	8800	11:52	〃	〃	〃	6.73	1302	-86	0.05	10.39	18.5
11	10,000	11:54	〃	〃	〃	6.74	1304	-86	0.02	19.79	17.92
12	10,800	11:56	〃	〃	〃	6.74	1307	-86	0.04	1.417	17.8
13	12,000	11:58	〃	〃	〃	6.73	1309	-87	0.03	1.088	18.4
14	13,600	12:02	〃	〃	〃	6.73	1311	-87	0.03	0.7872	18.0

DAR

Start Time: 11:31 Elapsed Time (min): 31 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: 12:02 Average Purge Rate (mL/min): 400 Date Calibrated: 2/13/14

SAMPLING DATA

Sample Date: 2/13/14 Sample Time: 12:05 Lab Analysis: ~~VOC~~ SVOC

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

VOA Vials, No Headspace ☐ Initials: NA

COMMENTS:

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

Total Purge Volume: 13600 ml

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** P Madrigal, L Rathnow

DATE: 1/15/14 **WEATHER:** Sunny, 25F

MONITORING WELL ID: MW-10 **SAMPLE ID:** MW10-ROX-011514, MW10-ROX-011514-MS, MW10-ROX-011514-MSD

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 54.76 ft
Depth to Water (btoc): 44.02 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 44.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 10.74 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) = 49.43 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0840	44.02	Colorless	none	6.80	1.664	-107	0.17	48.76	16.07
1200	0843	44.02	Colorless	none	6.82	1.665	-112	0.11	38.51	16.66
2000	0845	44.02	Colorless	none	6.83	1.661	-115	0.06	28.09	16.05
2800	0847	44.02	Colorless	none	6.84	1.659	-118	0.04	22.65	17.12
3600	0849	44.02	Colorless	none	6.84	1.652	-120	0.03	15.62	17.11
4800	0852	44.02	Colorless	none	6.85	1.644	-121	0.02	13.22	17.12
5600	0854	44.02	Colorless	none	6.85	1.636	-123	0.02	10.40	17.14
6800	0857	44.02	Colorless	none	6.85	1.632	-124	0.01	9.924	17.17

DM

Start Time: 0841 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 – RZ4331

Stop Time: 0857 Average Purge Rate (mL/min): 400 Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 Sample Time: 0900 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace [X] Initials: DM

COMMENTS:

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

Total Purge Volume: 6800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMcHendy, LRathnow

DATE: 1/15/14 WEATHER: Sunny, 23°F

MONITORING WELL ID: MW-11 SAMPLE ID: MW11-ROX-011514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 51.99 ft
Depth to Water (btoc): 41.77 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): 10.22 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) = 46.666 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0947	41.77	colorless	none	6.81	1.582	-93	0.13	47.64	15.78
800	0949	41.77	colorless	none	6.78	1.585	-94	0.09	49.97	16.07
2000	0952	41.77	cloudy	none	6.80	1.587	-97	0.06	39.42	16.28
3800	0954	41.77	cloudy	none	6.77	1.589	-97	0.04	31.98	16.40
3600	0956	41.77	cloudy	none	6.77	1.589	-98	0.03	19.50	16.48
4800	0959	41.77	clear	none	6.77	1.588	-99	0.02	15.04	16.60
5600	1001	41.77	clear	none	6.77	1.587	-100	0.02	9.788	16.61

DM

Start Time: 0947 Elapsed Time (min): 14 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1001 Average Purge Rate (mL/min): 400 Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 Sample Time: 1005 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: DM

COMMENTS:

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

Total Purge Volume: 5600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMacKindy, L Rathnow

DATE: 1/15/14 WEATHER: Sunny, 25F

MONITORING WELL ID: MW-12 SAMPLE ID: MW12-ROX-011514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.25 ft
Depth to Water (btoc): 42.15 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): 10.10 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) = 46.92 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 : 890* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2670 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1030	42.15	Cloudy	none	6.91	0.970	35	0.55	102.2	15.67
1200	1033	42.15	Cloudy	none	6.84	0.9814	40	0.42	101.2	16.38
2000	1035	42.15	Cloudy	none	6.82	0.9824	43	0.36	98.42	16.58
2800	1037	42.15	Cloudy	none	6.81	0.9818	46	0.31	87.75	16.83
3600	1039	42.15	Cloudy	none	6.80	0.9797	48	0.23	80.98	16.92
4800	1042	42.15	Cloudy	none	6.80	0.9779	51	0.17	76.20	17.08
5600	1044	42.15	Colorless	none	6.80	0.9763	53	0.13	73.53	17.13
6800	1047	42.15	Colorless	none	6.79	0.9766	56	0.14	4.913	17.15

DM

Start Time: 1030 Elapsed Time (min): 17 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1047 Average Purge Rate (mL/min): 400 Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 Sample Time: 1050 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 6800 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: L. Rathmon, K Hurst

DATE: 1/29/14 | WEATHER: Sunny, 15°F

MONITORING WELL ID: MW-13 | SAMPLE ID: MW13 - Rox - 012914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 35.82 ft
Depth to Water (btoc): 29.34 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 25.57 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.48 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) = ~~30.57~~ 32.58 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 : 801* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2402 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 257.0 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	µS/cm ~~(mS/cm)~~ Cond.	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1505	29.35	Clear	None	6.84	1448	-95	0.17	82.600	18.02
1200	1508				6.77	1452	-96	0.08	119.1	18.82
2400	1511				6.76	1454	-98	0.05	105.9	19.11
3600	1514				6.75	1454	-100	0.03	75.48	19.34
4800	1517				6.75	1451	-102	0.02	47.56	19.42
6000	1520				6.75	1451	-104	0.01	27.94	19.33
7200	1523				6.75	1449	-105	0.01	16.67	19.38
8400	1527				6.75	1449	-107	0.00	9.215	19.40

Start Time: 1505 | Elapsed Time (min): 22 | Water Quality Meter ID & SN: TROLL 9500 – R24337
Stop Time: 1527 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/29/14

SAMPLING DATA

Sample Date: 1/29/14 | Sample Time: 1530 | Lab Analysis: VOC, SVOC
Sample Method: Monsoon Pump / Low Flow | Sample Flow Rate (mL/min): 400 | QA/QCSamples: None
VOA Vials, No Headspace ☒ Initials: KH

COMMENTS:

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

Total Purge Volume: 8400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: L. Rothrock, K. Hurst

DATE: 1/29/14 WEATHER: Sunny 15°F

MONITORING WELL ID: MW-14 SAMPLE ID: MW14-ROX-012914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 44.00 ft
Depth to Water (btoc): 33.40 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): 10.60 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) = 38.42 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: 0.0 ppm
Wellbore PID/FID Reading: 36.8 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1038	33.42	clear	none	6.68	1.150	-70	0.25	3,005	15.42
800	1040	33.42	clear	none	6.66	1.153	-74	0.16	3.307	15.86
2000	1043	33.42	clear	none	6.66	1.152	-78	0.12	5.043	16.15
2800	1045	33.43	clear	none	6.66	1.155	-82	0.08	4.228	16.33
3600	1047	33.43	clear	none	6.65	1.154	-85	0.06	3.794	16.52
4400	1049	33.43	clear	none	6.66	1.155	-87	0.04	4.062	16.65
5200	1051	33.43	clear	none	6.66	1.156	-90	0.03	3.113	16.71

Start Time: 1038 Elapsed Time (min): 13 Water Quality Meter ID & SN: TROLL 9500 – RZ4331

Stop Time: 1051 Average Purge Rate (mL/min): 400 Date Calibrated: 1/29/14

SAMPLING DATA

Sample Date: 1/29/14 Sample Time: 1055 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace: ☒ Initials: LHR

COMMENTS:

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

Total Purge Volume: 5200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: DWattingly, LRathnow

DATE: 1/15/14 | WEATHER: sunny, 30°F

MONITORING WELL ID: MW-16 | SAMPLE ID: MW16-ROX-011514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 47.31 ft
Depth to Water (btoc): 43.39 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 37.43 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 3.92 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) = 45.50 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1330	43.42	cloudy	none	6.61	1.503	-17	0.42	233.2	15.09
1200	1334	43.42	cloudy	none	6.55	1.522	-37	0.22	151.7	15.95
2100	1337	43.42	cloudy	none	6.54	1.549	-48	0.14	82.44	16.40
3000	1340	43.42	cloudy	none	6.54	1.571	-56	0.09	44.21	16.43
3900	1343	43.42	clear	none	6.55	1.575	-60	0.07	26.06	16.47
4800	1346	43.42	clear	none	6.55	1.583	-63	0.06	15.83	16.53
5700	1349	43.42	clear	none	6.55	1.579	-66	0.05	9.450	16.61

Start Time: 1330 | Elapsed Time (min): 19 | Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1349 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 | Sample Time: 1355 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DW

COMMENTS:

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

Total Purge Volume: 5700 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: DChase / D. Mattingly

DATE: 1-20-14 | WEATHER: sunny 55°F

MONITORING WELL ID: MW-22 | SAMPLE ID: MW22-ROX-012014, MW22-ROX-012014-DUP

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.13 ft
Depth to Water (btoc): 42.14 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): 5.99 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) = 43.21 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1306	42.14	colorless DNE	HC	6.88	10533	-87	0.29	13.97	18.31
1200	1309	42.14	clear DNE	HC	6.83	1081	-89	0.15	4.05	18.85
2400	1312	42.14	clear DNE	HC	6.81	1096	-95	0.10	9.895	19.27
3200	1314	42.14	colorless	HC	6.80	1105	-99	0.07	8.889	19.48
4000	1316	42.14	colorless	HC	6.79	1111	-102	0.05	8.082	19.50
4800	1318	42.14	colorless	HC	6.78	1115	-104	0.04	7.572	19.54

Start Time: 1306 | Elapsed Time (min): 12 mins | Water Quality Meter ID & SN: TROLL 9500 – RA331

Stop Time: 1318 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1-2014

SAMPLING DATA

Sample Date: 1-20-14 | Sample Time: 1325 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: DAC, DM

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 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: DMadkingly, LRathnow

DATE: 1/15/14 | WEATHER: sunny, 32°F

MONITORING WELL ID: MW-24 | SAMPLE ID: MW24-ROX-011514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 49.14 ft
Depth to Water (btoc): 43.05 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 38.89 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.09 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) = 45.89 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 : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 4.3 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1436	43.05	Cloudy	none	6.79	1.306	73	0.25	179.0	16.14
800	1438	43.05	Cloudy	none	6.77	1.343	78	0.15	147.1	16.39
1600	1440	43.05	Cloudy	none	6.76	1.345	81	0.13	130.8	16.69
2400	1442	43.05	Cloudy	none	6.76	1.343	84	0.11	86.64	16.82
3600	1445	43.05	Cloudy	none	6.75	1.347	86	0.09	43.95	16.86
4400	1447	43.05	Clear	none	6.75	1.344	88	0.09	24.81	16.94
5600	1450	43.05	Clear	none	6.75	1.339	91	0.09	14.25	17.00
6400	1452	43.05	Clear	none	6.75	1.338	91	0.08	8.147	16.98

Start Time: 1436 | Elapsed Time (min): 16 | Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1452 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 | Sample Time: 1455 | Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 6400 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DMattingly, L Rathnow

DATE: 1/15/14 **WEATHER:** sunny, 32°F

MONITORING WELL ID: P-54 **SAMPLE ID:** ~~MLL~~ DM P54-ROX-011514

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.00 ft
Depth to Water (btoc): 41.75 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): 21.25 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) = 50.50 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: 0.0 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	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	1524	41.75	clear	none	6.91	1.172	95	2.04	31.12	14.55
1200	1527	41.75	clear	none	6.80	1.169	100	1.80	27.21	15.18
2000	1529	41.75	clear	none	6.76	1.167	103	1.72	28.72	15.39
2800	1531	41.75	clear	none	6.75	1.161	105	1.62	17.40	15.86
3600	1533	41.75	clear	none	6.75	1.156	106	1.54	16.89	15.99
4800	1536	41.75	clear	none	6.74	1.153	108	1.46	12.72	16.02
5600	1538	41.75	clear	none	6.74	1.147	108	1.40	7.527	16.08

DM

Start Time: 1524 Elapsed Time (min): 15 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1539 Average Purge Rate (mL/min): 400 Date Calibrated: 1/15/14

SAMPLING DATA

Sample Date: 1/15/14 Sample Time: 1540 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 5600 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** ~~~~

DATE: ~~~~ **WEATHER:** ~~~~

MONITORING WELL ID: P-55 **SAMPLE ID:** ~~~~

INITIAL DATA

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

Water Column Height (do not include LNAPL or DNAPL): ~~~~ 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: ~~~~ 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

Not sampled because product is present.

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

Total Purge Volume: ~~~~ mL

2.16

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D. Mattingly, M. Manske

DATE: 1-22-14 WEATHER: Cold, Sunny, 36°

MONITORING WELL ID: P-56 SAMPLE ID: P56-Rox-012214

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.82 ft
Depth to Water (btoc): 46.27 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 40.82 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): 19.55 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) = — 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) = 53.32 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: 0.0 ppm
Wellbore PID/FID Reading: 29.2 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	~~µS/cm~~ Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1511	46.27	clear	—	6.58	1260	-83	0.24	5.637	20.42
900	1514	46.27	clear	—	6.62	1327	-91	0.14	6.138	21.35
1800	1516	46.27	clear	—	6.65	1356	-96	0.09	6.639	21.64
2700	1518	46.27	clear	—	6.66	1354	-98	0.06	7.654	21.66
3600	1521	46.27	clear	—	6.67	1350	-100	0.05	23.40	21.69
4500	1523	46.27	clear	—	6.66	1348	-100	0.05	7.126	21.79

Start Time: 1511 Elapsed Time (min): 12 minutes Water Quality Meter ID & SN: TROLL 9500 - R24331

Stop Time: 1523 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 1/22/14

SAMPLING DATA

Sample Date: 1-22-14 Sample Time: 1525 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400 mL/min 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 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D Mattingly, M Maurer

DATE: 2-3-14 WEATHER: Cold, Sunny, 15°F

MONITORING WELL ID: P-57 SAMPLE ID: P57-Rox-020314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.46 ft
Depth to Water (btoc): 46.60 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): 18.86 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) = — 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) = 52.96 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1122	46.60	cloudy	—	6.76	1.275	-130	0.45	17.30	18.50
880	1125	46.60	clear	—	6.67	1.278	-137	0.21	13.66	19.53
1760	1127	46.60	clear	—	6.65	1.280	-143	0.13	19.21	20.06
2640	1130	46.60	clear	—	6.64	1.280	-148	0.09	14.25	20.27
3520	1132	46.60	clear	—	6.65	1.280	-153	0.06	18.13	20.31
4400	1134	46.60	clear	—	6.64	1.283	-157	0.04	21.90	20.38
5280	1137	46.60	clear	—	6.65	1.284	-161	0.02	22.73	20.39
6160	1139	46.60	clear	—	6.66	1.282	-164	0.01	28.01	20.44
7040	1141	46.60	clear	—	6.65	1.280	-167	0.02	13.33	20.36
7920	1144	46.60	clear	—	6.64	1.278	-169	0.01	19.47	20.38
8800	1146	46.60	clear	—	6.64	1.275	-171	0.00	11.53	20.48
9680	1149	46.60	clear	—	6.64	1.274	-174	0.01	10.50	20.33
10,560	1151	46.60	clear	—	6.64	1.274	-176	0.01	18.95	20.40
11,440	1153	46.60	clear	—	6.66	1.271	-178	0.00	9.672	20.29

Start Time: 1122 Elapsed Time (min): 31 minutes Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1153 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 2-3-14

SAMPLING DATA

Sample Date: 2-3-14 Sample Time: 1155 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 400mL/min 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: 11,440 mL

2.11

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D. Mattingly, M. Manske

DATE: 2-3-14 WEATHER: Cold, Sunny 25°F

MONITORING WELL ID: P-58 SAMPLE ID: P58-Rox-020314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 65.21 ft
Depth to Water (btoc): 44.93 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): 20.28 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) = 52.71 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: 0.0 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1346	44.93	clear	hydrocarbon	6.67	1176	-136	0.44	18.81	17.04
880	1348	44.93	clear	hydrocarbon	6.60	1180	-140	0.20	17.64	18.22
1760	1351	44.93	clear	hydrocarbon	6.58	1183	-144	0.13	26.75	18.51
2640	1353	44.90	clear	hydrocarbon	6.56	1184	-147	0.11	16.64	18.83
3520	1355	44.90	clear	hydrocarbon	6.57	1187	-151	0.08	19.46	18.89
4400	1358	44.90	clear	hydrocarbon	6.55	1190	-154	0.06	22.15	18.76
5280	1400	44.90	clear	hydrocarbon	6.56	1190	-158	0.08	16.03	17.99
6160	1403	44.90	clear	hydrocarbon	6.55	1192	-159	0.06	15.55	18.34
7040	1406	44.90	clear	hydrocarbon	6.55	1196	-161	0.04	17.37	18.97
7920	1408	44.90	clear	hydrocarbon	6.55	1201	-163	0.04	7.997	18.92

2/3/14

Start Time: 1346 Elapsed Time (min): 22 minutes Water Quality Meter ID & SN: TROLL 9500

Stop Time: 1408 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 2-3-14

SAMPLING DATA

Sample Date: 2-3-14 Sample Time: 1410 Lab Analysis: VOC, SVOC

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

2.20

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D. Matting/, M. Yanske

DATE: 2-3-14 WEATHER: Cold, 9°F, Sunny

MONITORING WELL ID: P-59 SAMPLE ID: P59-RoX-020314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 72.91 ft
Depth to Water (btoc): 47.53 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): 25.38 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) = 60.41 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: [redacted] ppm
Wellbore PID/FID Reading: 102.3 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1008	47.53	clear	hydrocarbon	6.52	1521	-132	0.56	16.48	17.95
932	1011	47.53	clear	hydrocarbon	6.53	1527	-151	0.25	15.16	18.47
1864	1013	47.53	clear	hydrocarbon	6.54	1522	-165	0.15	12.84	18.25
2796	1016	47.53	clear	hydrocarbon	6.55	1513	-173	0.10	17.60	17.60
3728	1018	47.53	clear	hydrocarbon	6.56	1502	-183	0.07	12.42	17.55
4660	1021	47.53	clear	hydrocarbon	6.58	1497	-190	0.06	11.69	17.84
5592	1023	47.53	clear	hydrocarbon	6.57	1491	-196	0.05	12.35	17.96
6524	1026	47.53	clear	hydrocarbon	6.57	1486	-203	0.04	11.88	17.87

Start Time: 1008 Elapsed Time (min): 18 minutes Water Quality Meter ID & SN: TROLL 9500 -A2433

Stop Time: 1026 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 2-3-14

SAMPLING DATA

Sample Date: 2-3-14 Sample Time: 1030 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: MM

COMMENTS:

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

Total Purge Volume: 6524 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D Mattingly, M Manker

DATE: 1/22/14 WEATHER: sunny, 20°F

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

INITIAL DATA

Well Diameter): 0.75 in 21.20
Total Well Depth (btoc): ~~23.84~~ ft
Depth to Water (btoc): 19.02 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 13.84 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): — 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: 0.0 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

Start Time: — Elapsed Time (min): — Water Quality Meter ID & SN: TROLL 9500 -- ~~R21331~~ R21331

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

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DMattingly, M Mansker

DATE: 1/22/14 **WEATHER:** —

MONITORING WELL ID: P-60-13S **SAMPLE ID:** —

INITIAL DATA

Well Diameter): 0.75 in
Total Well Depth (btoc): ~~20.00~~ 19.17 ft
Depth to Water (btoc): 17.80 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): — 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: 0.0 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	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: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

VOA Vials, No Headspace ☐ Initials: —

COMMENTS: Not enough water to sample.

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW | PROJECT NUMBER: 21562973.03001 | FIELD PERSONNEL: L. Rathnow, K. Hurst

DATE: 1/29/14 | WEATHER: Sunny 15°F

MONITORING WELL ID: P-66 | SAMPLE ID: P66-ROX-012914

DTW 36.19

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 59.72 ft
Depth to Water (btoc): ~~34.98~~ NE 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): 23.54 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) = 37.22 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: 0.8 ppm
Wellbore PID/FID Reading: 0.8 ppm

PURGE DATA

Pump Type: Monsoon Stainless Steel Submersible Pump

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH (STABLE: +/- 0.2, over 3 readings)	Cond. (mS/cm) (+/-3%)	ORP (mV) (+/-20)	DO (mg/L) (+/-0.2 mg /L or +/-10%)	Turbidity (NTUs) (<10 or +/-10%)	Temp (°C) (+/- 0.2 °C)
0	0932	36.19	clear	none	6.35	1.210	-58	0.23	15.50	17.51
1200	0935	36.19	clear	none	6.40	1.208	-71	0.14	15.22	17.96
2000	0937	36.19	clear	none	6.42	1.209	-78	0.10	14.08	18.20
2800	0939	36.19	clear	none	6.44	1.220	-82	0.07	14.38	18.50
4000	0942	36.19	clear	none	6.44	1.220	-85	0.05	13.25	18.47
4800	0944	36.19	clear	none	6.44	1.221	-87	0.04	9.762	18.56

Start Time: 0932 | Elapsed Time (min): 12 | Water Quality Meter ID & SN: TROLL 9500 – R24331
Stop Time: 0944 | Average Purge Rate (mL/min): 400 | Date Calibrated: 1/29/14

SAMPLING DATA

Sample Date: 01/29/14 | Sample Time: 0950 | 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: LAR

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 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: ~~~

DATE: ~~~ WEATHER: ~~~

MONITORING WELL ID: P-68 SAMPLE ID: ~~~

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 70.26 ft
Depth to Water (btoc): ~~~ ft
Depth to LNAPL/DNAPL (btoc): ~~~ ft
Depth to Top of Screen (btoc): 45.26 ft
Screen Length): 25 ft

Water Column Height (do not include LNAPL or DNAPL): ~~~ 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

Not sampled because product is present.

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:

Total Purge Volume: ~~~ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DNattingly, DChase

DATE: 1/24/14 WEATHER: sunny, 15°F

MONITORING WELL ID: P-74 SAMPLE ID: P74-ROX-012414

INITIAL DATA

Well Diameter): 4 in
Total Well Depth (btoc): 69.43 ft
Depth to Water (btoc): 43.35 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): 26.08 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: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1129	43.35	Clear	HC	6.59	0.6540	-77	0.34	18.74	15.18
1200	1133	43.35	Clear	HC	6.58	0.6543	-83	0.23	27.81	15.75
2100	1136	43.35	Clear	HC	6.59	0.6483	-87	0.31	17.49	16.14
3000	1139	43.35	Clear	HC	6.59	0.6543	-91	0.24	30.57	16.34
4500	1143	43.35	Clear	HC	6.59	0.6577	-93	0.05	13.51	16.47
5100	1146	43.35	Clear	HC	6.59	0.6622	-96	0.01	14.20	16.83
6000	1149	43.35	Clear	HC	6.60	0.6671	-98	-0.01	17.79	16.66
7200	1152	43.35	Clear	HC	6.60	0.6734	-100	-0.01	13.35	16.50
8400	1156	43.35	Clear	HC	6.61	0.6800	-102	-0.02	13.58	16.50
9300	1159	43.35	Clear	HC	6.61	0.6824	-103	-0.02	14.25	16.61

DM

Start Time: 1129 Elapsed Time (min): 30 Water Quality Meter ID & SN: TROLL 9500 – 824331

Stop Time: 1159 Average Purge Rate (mL/min): 300 Date Calibrated: 1/24/14

SAMPLING DATA

Sample Date: 1/24/14 Sample Time: 1205 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace [X] Initials: DM

COMMENTS:

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

Total Purge Volume: 9300 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: L. Rathbun, K. Hurst

DATE: 1/29/14 WEATHER: Sunny 20°F

MONITORING WELL ID: P-93A SAMPLE ID: P93A-ROX-012914

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 63.17 ft
Depth to Water (btoc): ~~46.39~~ 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): 16.78 ft btoc
If Depth to Top of Screen is > Depth to Water, Place Pump at: 55.67
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 : 2865* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 8596 mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 46.4 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	12:29	46.39	clear	none	7.02	1.845	-81	4.18	37.77	19.18
600	12:31	46.39	clear	none	7.01	1.848	~~-79~~	~~4.26~~ 4.36	28.11	19.48
2100	12:36	46.39	clear	none	7.00	1.865	-77	4.16	302.8	19.41
3600 ~~3100~~	12:41	46.39	clear	none	6.99	1.865	-76	4.27	57.06	19.32
4100	12:46	46.39	clear	none	7.00	1.868	-75	4.47	709.8	19.32
5600	12:51	46.39	clear	none	7.00	1.870	-74	4.74	26.16	19.46
6100	12:56	46.39	clear	none	7.01	1.871	-73	4.73	28.40	19.23
~~7600~~ 10000	13:01	46.39	clear	none	6.99	1.872	-74	4.65	24.94	19.48
see comments below										

Start Time: 12:29 Elapsed Time (min): ~~32~~ 32 Water Quality Meter ID & SN: TROLL 9500 – RZ4331

Stop Time: 13:01 Average Purge Rate (mL/min): 300 Date Calibrated: 1/29/14

SAMPLING DATA

Sample Date: 1/29/14 Sample Time: 13:05 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: none

VOA Vials, No Headspace ☒ Initials:

COMMENTS:

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

Before first reading was taken ~3000mL were purged from well. Therefore, total purge volume = 10000 so min. purge volume was met.

Total Purge Volume: 10000 mL

5.25

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: M. Manske, D. Mattingly

DATE: 1-28-14 WEATHER: Bitterly cold. 4°C. Very cold. Sunny Cold.

MONITORING WELL ID: P-93B SAMPLE ID: P93B-ROX-012814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 76.60 ft
Depth to Water (btoc): 46.60 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 74.60 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 30.00 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: 8.0 ppm
Wellbore PID/FID Reading: 8.0 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0933	46.60	clear	hydrocarbon	6.84	1620	-89	2.26	1.765	15.19
2160	0939	46.60	clear	hydrocarbon	6.86	1633	-88	2.80	2.665	15.57
4320	0945	46.60	clear	—	6.86	1624	-85	2.63	0.841	15.69
6480	0950	46.60	clear	—	6.86	1633	-87	2.64	3.395	16.04
8640	0956	46.60	clear	—	6.87	1630	-87	2.56	5.248	16.03
10800	1002	46.60	clear	—	6.86	1628	-88	2.31	7.010	16.37
12960	1007	46.55	clear	—	6.87	1624	-87	2.31	358.6	16.38
15120	1013	46.55	clear	—	6.85	1618	-87	1.63	10.59	15.97
17280	1019	46.55	clear	—	6.85	1612	-88	1.51	5.117	15.80
19440	1025	46.55	clear	—	6.84	1605	-88	1.42	9.488	15.80
12440	1035	46.55	clear	—	6.84	1605	-87	1.62	4.332	15.74

Start Time: 0933 Elapsed Time (min): 58 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1031 Average Purge Rate (mL/min): 400 Date Calibrated: 1-28-14

SAMPLING DATA

Sample Date: 1/28/14 Sample Time: 1035 Lab Analysis: VOC, SVOC

Sample Method: Bladder Pump / Low Flow Sample Flow Rate (mL/min): 400 QA/QCSamples: DUP

VOA Vials, No Headspace: 4 Initials: DM

COMMENTS:

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

Total Purge Volume: 12,440 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D Mattingly, D Chase

DATE: 1/24/14 WEATHER: Sunny, 19°F

MONITORING WELL ID: P-93C SAMPLE ID: P-93C-ROX-012414

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 96.26 ft
Depth to Water (btoc): 46.05 ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 94.26 ft
Screen Length): 2 ft

Water Column Height (do not include LNAPL or DNAPL): 50.21 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: 0.0 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1424	46.05	clear	HC	6.92	1.297	-62	2.16	-0.4140	15.77
2400	1430	46.05	clear	HC	6.92	1.297	-63	1.83	-0.7872	15.72
5200	1437	46.05	clear	HC	6.94	1.295	-65	1.71	-0.0992	15.81
8000	1444	46.05	clear	HC	6.92	1.301	-65	1.90	0.3303	15.75
10800	1451	46.05	clear	HC	6.92	1.298	-66	1.79	1.080	15.95
13600	1458	46.05	clear	HC	6.94	1.298	-67	1.88	0.1225	15.83

DM

Start Time: 1424 Elapsed Time (min): 34 Water Quality Meter ID & SN: TROLL 9500 - R24331

Stop Time: 1458 Average Purge Rate (mL/min): 400 Date Calibrated: 1/24/14

SAMPLING DATA

Sample Date: 1/24/14 Sample Time: 1500 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 13600 mL

3.12

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D Nattingly, M. Monsees

DATE: ~~1-24-14~~ 1-31-14 WEATHER: Cold, windy, 25°, cloudy

MONITORING WELL ID: P-93D SAMPLE ID: P93D-ROX-013114

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 128.00 ft
Depth to Water (btoc): ~~46.53~~ 46.53 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): 81.47 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) = 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 ppm
Wellbore PID/FID Reading: 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1448	46.53	clear	hydrocarbon	6.81	1345	-226	0.36	18.68	16.37
1300	1452	46.53	clear	—	6.84	1372	-242	0.20	8.198	16.85
2600	1455	46.53	clear	—	6.87	1374	-253	0.12	3.695	17.10
3900	1459	46.53	clear	—	6.90	1377	-263	0.07	1.905	17.16
5200	1503	46.53	clear	—	6.92	1378	-268	0.06	1.378	17.34
6500	1506	46.53	clear	—	6.93	1378	-274	0.04	0.5828	17.14

Start Time: 1448 Elapsed Time (min): 18 minutes Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1506 Average Purge Rate (mL/min): 400 mL/min Date Calibrated: 1-31-14

SAMPLING DATA

Sample Date: 1-31-14 Sample Time: 1510 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials:

COMMENTS:

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

Total Purge Volume: 6500 mL

3.50

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** M. Mansker, D. Mattingly + D Chase

DATE: 1-28-14 **WEATHER:** Cold, 13°, Sunny

MONITORING WELL ID: P-114 **SAMPLE ID:** P114-Rox-012814

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 52.67 ft
Depth to Water (btoc): 32.54 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): 20.13 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: 0.5 ppm
Wellbore PID/FID Reading: 0.5 ppm

PURGE DATA

Pump Type: Dedicated Well Wizard

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	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	1441	32.54	clear	—	8.52	938.8	-120	1.45	27.26	17.53
1560	1446	32.54	clear	—	8.10	995.2	-114	1.76	54.06	17.44
3120	1451	32.54	clear	—	7.79	1041	-114	1.90	22.37	17.34
4680	1454	32.54	clear	—	7.62	1072	-109	2.06	31.06	17.40
6240	1458	32.54	clear	—	7.73	1087	-106	2.05	31.26	16.38
7840	1502	32.54	clear	—	7.54	1096	-98	3.21	27.56	15.27
9440	1506	32.54	clear	—	7.52	1105	-95	3.32	32.28	15.08
11040	1510	32.54	clear	—	7.50	1110	-93	3.38	30.19	15.09
12640	1514	32.54	clear	—	7.49	1114	-91	3.44	41.60	15.11
14240	1518	32.54	clear	—	7.48	1121	-89	3.47	46.59	15.18
15840	1522	32.54	clear	—	7.47	1127	-87	3.51	44.21	14.97
17440	1526	32.54	clear	—	7.46	1133	-86	3.51	44.55	15.11
18040	1530	32.54	clear	—	7.46	1142	-86	3.56	40.26	15.12
19640	1534	32.54	clear	—	7.45	1144	-85	3.59	42.16	15.15
21240	1538	32.54	clear	—	7.45	1152	-84	3.47	49.52	15.79
22840	1542	32.54	clear	—	7.35	1163	-84	2.89	73.50	17.74

Start Time: 1441 Elapsed Time (min): 97 mins Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1618 Average Purge Rate (mL/min): 400 mL Date Calibrated: 1-28-14

SAMPLING DATA

Sample Date: 1-28-14 Sample Time: 1625 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☑ Initials: DAC, DM

COMMENTS:

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

* Stopped before turbidity stable b/c compressor & bubbles keep parameter out - confirmed w/ L. Rathnow

Total Purge Volume: 37240 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: 1Q14 Roxana GW **PROJECT NUMBER:** 215629730300 1 **FIELD PERSONNEL:** Drasel Brattingly

DATE: 1-28-14 **MONITORING WELL ID:** P114-ROX-012814

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	±0.2 pH	±0.3 Cond. (mS/cm)	ORP (mV) ±20	DO (mg/L) 10%	Turbidity (NTUs) 10%	Temp. ±0.2(°C)
24440	1546	32.54	clear	—	7.31	1180	-86	2.99	42.49	18.25
26040	1550	32.54	clear	—	7.26	1191	-88	2.65	41.62	18.28
27640	1554	32.54	clear	—	7.23	1202	-88	2.55	43.56	18.33
29240	1558	32.54	clear	—	7.19	1210	-89	2.52	45.06	18.06
30840	1602	32.54	clear	—	7.18	1218	-84	2.30	40.23	17.95
32440	1606	32.54	clear	—	7.16	1223	-88	2.20	46.03	17.97
34040	1610	32.54	clear	—	7.15	1223	-87	2.20	41.75	18.08
35640	1614	32.54	clear	—	7.14	1226	-87	2.23	55.43	18.08
37240	1618	32.54	clear	—	7.13	1228	-86	2.25	47.51	18.07

1-28-14

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** DMattingly, DChase

DATE: 1/17/14 **WEATHER:** Cloudy, 20°F

MONITORING WELL ID: ROST-3-MW **SAMPLE ID:** ROST3MW-ROX-011714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 41.85 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): 6.21 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) = 42.81 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 : 879* mL
Minimum Purge Volume = (3 x Flow Cell Volume): 2636 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1033	41.83	Cloudy	none	7.06	0.9307	-109	0.35	109.8	14.41
1200	1036	41.93	cloudy	none	7.00	0.9310	-112	0.19	82.87	15.12
2000	1038	41.93	Cloudy	none	6.98	0.9334	-114	0.13	72.46	15.44
2800	1040	41.93	Cloudy	none	6.96	0.9340	-116	0.13	41.32	15.57
3600	1042	41.93	Clear	none	6.95	0.9349	-118	0.09	26.62	15.53
4400	1044	41.93	clear	none	6.95	0.9352	-119	0.07	19.51	15.73
5600	1047	41.99	clear	none	6.94	0.9357	-120	0.05	15.79	15.77
6400	1049	41.99	clear	none	6.94	0.9347	-121	0.05	21.74	15.80
★		41.99	clear	none						
0	1210	41.90	Cloudy	none	7.12	0.9301	-90	1.43	217.6	14.76
1200	1213	41.90	cloudy	none	7.02	0.9374	-96	0.59	138.3	15.55
2000	1215	41.90	Cloudy	none	6.99	0.9397	-101	0.26	93.70	15.89
2800	1217	41.90	cloudy	none	6.97	0.9401	-105	0.14	66.17	16.01
4000	1220	41.90	cloudy	none	6.96	0.9401	-109	0.08	34.60	16.13
4800	1222	41.91	Clear	none	6.95	0.9395	-112	0.05	20.59	16.17
5600	1224	41.91	clear	none	6.95	0.9396	-114	0.02	13.55	16.00

Start Time: ~~1033~~ DM 1210 Elapsed Time (min): 19 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 1229 Average Purge Rate (mL/min): 400 Date Calibrated: 1/17/14

SAMPLING DATA

Sample Date: 1/17/14 Sample Time: ~~1230~~ DM 1235 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

★ Rugged Reader frozen and would not update reading. Turned device off and when went to reconnect, device was not found. Tried detaching + reattaching cords, but ~~[illegible]~~ not work. Went back to trailer to call Insitu, was able to get it working again.

Total Purge Volume: 7200 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana GW Sampling 1014 **PROJECT NUMBER:** 21562973.0300 **FIELD PERSONNEL:** DMattingly, DChase

DATE: 1/17/14 **MONITORING WELL ID:** ROSTMW-ROX-011714

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp. (°C)
6400	1326	41.91	clear	none	6.95	0.9348	-115	0.01	11.03	16.07
7200	1328	41.91	clear	none	6.95	0.9343	-116	0.00	9.797	16.14

DM

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** L. Rothe, B. Haileamlam

DATE: 2/13/14 **WEATHER:** Sunny 45F

MONITORING WELL ID: ROST-3-MW **SAMPLE ID:** ROST3MW-ROX-021314

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 48.06 ft
Depth to Water (btoc): 41.94 ft
Depth to LNAPL/DNAPL (btoc): NE ft
Depth to Top of Screen (btoc): 37.81 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 6.12 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) = 45.00 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: 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	14:47	41.94	cloudy	none	7.00	0.9585	-103	2.53	160.1	15.93
1600	14:49	41.94	cloudy	none	6.95	0.9598	-108	2.19	120.9	16.31
3200	14:51	41.94	cloudy	none	6.94	0.9607	-111	1.99	82.29	16.50
4800	14:54	41.94	cloudy	none	6.93	0.9610	-113	1.78	55.08	16.74
6400	14:56	41.94	cloudy	none	6.92	0.96000	-115	1.40	46.25	16.70
8000	14:58	41.94	cloudy	none	6.92	0.9613	-116	1.11	31.28	16.91
9600	15:01	41.94	cloudy	none	6.92	0.9613	-118	0.97	24.17	16.99
11400	15:03	41.94	clear	none	6.92	0.9617	-119	0.87	19.01	17.03
7200	15:05	41.94	clear	none	6.92	0.9616	-120	0.77	14.75	17.00
9000	15:07	41.94	clear	none	6.92	0.9623	-120	0.21e	14.46	16.93
9800	15:09	41.94	clear	none	6.92	0.9625	-120	0.18	12.23	16.91
10000	15:12	41.94	clear	none	6.92	0.9625	-121	0.13	9.326	16.98
				YAR						

Start Time: 14:47 Elapsed TIme (min): 25 Water Quality Meter ID & SN: TROLL 9500 --

Stop Time: 15:12 Average Purge Rate (mL/min): 400 Date Calibrated: 2/13/14

SAMPLING DATA

Sample Date: 2/13/14 Sample Time: 15:15 Lab Analysis: ~~VOC~~ SVOC

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

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

COMMENTS:

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

Total Purge Volume: 10,000 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMeadingly, DChase

DATE: 1/17/14 WEATHER: cloudy, 18°F

MONITORING WELL ID: ROST-4-PZ(C) SAMPLE ID: ROST4PZ(C)-ROX-011714

INITIAL DATA

Well Diameter): 2 in
Total Well Depth (btoc): 45.20 ft
Depth to Water (btoc): 41.50 ft
Depth to LNAPL/DNAPL (btoc): ——— ft
Depth to Top of Screen (btoc): 34.95 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 3.70 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) = 43.35 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: 0.1 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	0934	42.10	Colorless	none	6.53	1.893	-50	0.12	10.91	16.06
1200	0938	42.10	Colorless	none	6.58	1.894	-60	0.07	7.347	16.69
2100	0941	42.10	Colorless	none	6.60	1.894	-69	0.04	4.904	16.84
3000	0944	42.15	Colorless	none	6.62	1.893	-71	0.02	3.293	17.00
3900	0947	42.15	Colorless	none	6.63	1.891	-75	0.02	3.174	17.09
4500	0949	42.15	Colorless	none	6.64	1.888	-79	0.01	3.678	17.08

Start Time: 0934 Elapsed Time (min): 16 Water Quality Meter ID & SN: TROLL 9500 -- R24331

Stop Time: 0950 Average Purge Rate (mL/min): 300 Date Calibrated: 1/17/14

SAMPLING DATA

Sample Date: 1/17/14 Sample Time: 0955 Lab Analysis: VOC, SVOC

Sample Method: Monsoon Pump / Low Flow Sample Flow Rate (mL/min): 300 QA/QCSamples: none

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 4500 mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: D Nadkarny, M Manske

DATE: 2/3/14 WEATHER: sunny, 25F

MONITORING WELL ID: ROST-5-PZ SAMPLE ID:

INITIAL DATA

Well Diameter): 1 in 23.00
Total Well Depth (btoc): 23.20 ft
Depth to Water (btoc): DRY ft
Depth to LNAPL/DNAPL (btoc): ft
Depth to Top of Screen (btoc): 13.20 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): 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: 0.8 ppm
Wellbore PID/FID Reading: 0.8 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	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: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): QA/QCSamples:

VOA Vials, No Headspace ☐ Initials:

COMMENTS: Dry. Not sampled

Total Purge Volume: mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DWethington, MManskee

DATE: 2/3/14 WEATHER: sunny, 25°F

MONITORING WELL ID: ROST-7-PZ SAMPLE ID: ~~[illegible]~~

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 30.00 ~~29.84~~ ft
Depth to Water (btoc): 23.44 ft
Depth to LNAPL/DNAPL (btoc): ~~[illegible]~~ ft
Depth to Top of Screen (btoc): 20.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): ~~[illegible]~~ 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) = ~~[illegible]~~ 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) = ~~[illegible]~~ ft btoc
If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = ~~[illegible]~~ ft btoc

Volume of Flow Through Cell : ~~[illegible]~~ mL
Minimum Purge Volume = (3 x Flow Cell Volume): ~~[illegible]~~ mL
Ambient PID/FID Reading: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: ~~[illegible]~~

	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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)

Start Time: ~~[illegible]~~ Elapsed Time (min): ~~[illegible]~~ Water Quality Meter ID & SN: TROLL 9500 ~~[illegible]~~

Stop Time: ~~[illegible]~~ Average Purge Rate (mL/min): Date Calibrated: ~~[illegible]~~

SAMPLING DATA

Sample Date: ~~[illegible]~~ Sample Time: ~~[illegible]~~ Lab Analysis: VOC, SVOC

Sample Method: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): ~~[illegible]~~ QA/QCSamples: ~~[illegible]~~

VOA Vials, No Headspace ☐ Initials: ~~[illegible]~~

COMMENTS: Able to get flow; however after 1 minute of purging approx. ~~3.5~~ 4 ft of drawdown. Rose fast.

Total Purge Volume: ~~[illegible]~~ mL

Exceeded drawdown criteria. Unable to pull sample.

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW **PROJECT NUMBER:** 21562973.03001 **FIELD PERSONNEL:** D Mathingly, M Manster

DATE: 2/3/14 **WEATHER:** 25°F, sunny

MONITORING WELL ID: ROST-10-PZ **SAMPLE ID:** —

INITIAL DATA

Well Diameter): 1 in
Total Well Depth (btoc): 20.00 1985 ft
Depth to Water (btoc): DRY ft
Depth to LNAPL/DNAPL (btoc): — ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): — 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: 0.0 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	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: Peristaltic Pump / Low Flow Sample Flow Rate (mL/min): — QA/QCSamples: —

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

COMMENTS: Well dry. Not sampled

Total Purge Volume: — mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMathusky, NManske

DATE: 2/3/14 WEATHER: 25°F, Sunny

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): DRY ft
Depth to LNAPL/DNAPL (btoc): ~~———~~ ft
Depth to Top of Screen (btoc): 10.00 ft
Screen Length): 10 ft

Water Column Height (do not include LNAPL or DNAPL): ~~———~~ 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: 0.0 ppm
Wellbore PID/FID Reading: 0.0 ppm

PURGE DATA

Pump Type: ~~———~~

Purge Volume (mL)	Time	Depth to Water (ft)	Color	Odor	pH	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

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: DRY. Not sampled

Total Purge Volume: ~~———~~ mL

LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: Roxana 1Q14 GW PROJECT NUMBER: 21562973.03001 FIELD PERSONNEL: DMcKinsey, DChase

DATE: 1/24/14 WEATHER: Sunny, 30°F

MONITORING WELL ID: T-12 SAMPLE ID: T12-ROX-012414

INITIAL DATA

Well Diameter): 6 in
Total Well Depth (btoc): 72.46 ft
Depth to Water (btoc): 45.08 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): 27.38 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: 0.0 ppm
Wellbore PID/FID Reading: 0.5 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	Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)
0	1552	45.08	colorless	HC	6.98	1.185	-101	0.22	3.120	15.91
1200	1555	45.08	colorless	HC	6.93	1.185	-106	0.10	2.486	16.42
2000	1557	45.08	colorless	HC	6.91	1.184	-109	0.07	2.125	16.47
3200	1600	45.08	colorless	HC	6.91	1.183	-111	0.03	1.473	16.38

Start Time: 1552 Elapsed Time (min): 8 Water Quality Meter ID & SN: TROLL 9500 – R24331

Stop Time: 1600 Average Purge Rate (mL/min): 400 Date Calibrated: 1/24/14

SAMPLING DATA

Sample Date: 1/24/14 Sample Time: 1605 Lab Analysis: VOC, SVOC

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

VOA Vials, No Headspace ☒ Initials: DM

COMMENTS:

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

Total Purge Volume: 3200 mL

Roxana Groundwater Quarterly – 1st Quarter 2014 Data Review

Laboratory SDG: MC27657

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/4/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW1-ROX-011414	MW9-ROX-011414-EB
MW9-ROX-011414	TB-ROX-011414-HCL
TB-ROX-011414-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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. SVOC acid fraction surrogate recoveries were outside evaluation criteria in samples MW1-ROX-011414 and MW9-ROX-011413 (re-sampled February 13, 2014 with reproducibly low acid-fraction surrogate recoveries). Although not indicated in the laboratory case narrative, acetone was detected in the trip blank. These issues are addressed further in the appropriate sections below. Additionally, the initial and continuing calibration verifications for acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D) and 40%D, respectively.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.4ºC, 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
TB-ROX-011414-HCL	VOCs	Acetone	4.6 ug/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required 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
MSV1025-BS	VOCs	Acrolein	**151**	70-130
MSV1025-BS	VOCs	2-Chloroethyl vinyl ether	**294**	70-130
MSV1026-BS	VOCs	Acrolein	**148**	70-130
MSV1026-BS	VOCs	2-Chloroethyl vinyl ether	**200**	70-130
OP36543-BS	SVOCs	Dimethyl phthalate	**16**	40-140
OP36543-BS	SVOCs	Hexachlorocyclopentadiene	**26**	40-140
OP36620-BS	SVOCs	4-Nitrophenol	**27**	30-130
OP36620-BS	SVOCs	bis(2-Chloroisopropyl)ether	**189**	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 OP36543-BS was associated with equipment blank MW9-ROX-011414-EB; equipment blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW9-ROX-011414	SVOCs	Dimethyl phthalate	**UJ**
MW9-ROX-011414	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW1-ROX-011414	SVOCs	4-Nitrophenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW1-ROX-011414-Run#1	SVOCs	2-Fluorophenol	**3**	15-110
MW1-ROX-011414-Run#2	SVOCs	2-Fluorophenol	**2**	15-110
MW1-ROX-011414-Run#1	SVOCs	Phenol-d_5	**6**	15-110
MW1-ROX-011414-Run#2	SVOCs	Phenol-d_5	**5**	15-110
MW1-ROX-011414-Run#2	SVOCs	2,4,6-Tribromophenol	**12**	15-110
MW9-ROX-011414-Run#1	SVOCs	2-Fluorophenol	**1**	15-110
MW9-ROX-011414-Run#2	SVOCs	2-Fluorophenol	**2**	15-110
MW9-ROX-011414-Run#1	SVOCs	Phenol-d_5	**4**	15-110
MW9-ROX-011414-Run#2	SVOCs	Phenol-d_5	**5**	15-110
MW9-ROX-011414-Run#1	SVOCs	2,4,6-Tribromophenol	**3**	15-110
MW9-ROX-011414-Run#2	SVOCs	2,4,6-Tribromophenol	**7**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Samples MW1-ROX-011414 and MW9-ROX-011414 were resampled on February 13, 2014. The associated acid-fraction surrogate recoveries (SDG 28321) were reproducibly low for the re-samples, indicating possible matrix interference.

Sample ID	Parameter	Analyte	Qualification
MW1-ROX-011414	SVOCs	Benzoic acid	**UJ**
MW1-ROX-011414	SVOCs	2-Chlorophenol	**UJ**
MW1-ROX-011414	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW1-ROX-011414	SVOCs	2,4-Dichlorophenol	**UJ**
MW1-ROX-011414	SVOCs	2,4-Dimethylphenol	**UJ**
MW1-ROX-011414	SVOCs	2,4-Dinitrophenol	**UJ**
MW1-ROX-011414	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW1-ROX-011414	SVOCs	2-Methylphenol	**UJ**
MW1-ROX-011414	SVOCs	3&4-Methylphenol	**UJ**
MW1-ROX-011414	SVOCs	2-Nitrophenol	**UJ**
MW1-ROX-011414	SVOCs	4-Nitrophenol	**UJ**
MW1-ROX-011414	SVOCs	Pentachlorophenol	**UJ**
MW1-ROX-011414	SVOCs	Phenol	**UJ**
MW1-ROX-011414	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW1-ROX-011414	SVOCs	2,4,6-Trichlorophenol	**UJ**
MW9-ROX-011414	SVOCs	Benzoic acid	**UJ**
MW9-ROX-011414	SVOCs	2-Chlorophenol	**UJ**
MW9-ROX-011414	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW9-ROX-011414	SVOCs	2,4-Dichlorophenol	**UJ**
MW9-ROX-011414	SVOCs	2,4-Dimethylphenol	**UJ**
MW9-ROX-011414	SVOCs	2,4-Dinitrophenol	**UJ**
MW9-ROX-011414	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW9-ROX-011414	SVOCs	2-Methylphenol	**UJ**
MW9-ROX-011414	SVOCs	3&4-Methylphenol	**UJ**
MW9-ROX-011414	SVOCs	2-Nitrophenol	**UJ**
MW9-ROX-011414	SVOCs	4-Nitrophenol	**UJ**
MW9-ROX-011414	SVOCs	Pentachlorophenol	**UJ**
MW9-ROX-011414	SVOCs	Phenol	**UJ**
MW9-ROX-011414	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW9-ROX-011414	SVOCs	2,4,6-Trichlorophenol	**UJ**

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

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27657

Sampling Date: 01/14/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **89**

Reviewed on 2/5/2014

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 (1154GAA) 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: MC27657

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27657-1	01/14/14	14:35	01/15/14	AQ	Ground Water	MW1-ROX-011414
MC27657-2	01/14/14	14:55	01/15/14	AQ	Ground Water	MW9-ROX-011414-EB
MC27657-3	01/14/14	15:30	01/15/14	AQ	Ground Water	MW9-ROX-011414
MC27657-4	01/14/14	00:00	01/15/14	AQ	Trip Blank Water	TB-ROX-011414-HCL
MC27657-5	01/14/14	00:00	01/15/14	AQ	Trip Blank Water	TB-ROX-011414-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27657
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	1/30/2014 11:36:21 AM

3 Sample(s) and 2 Trip Blank(s) were collected on 01/14/2014 and were received at Accutest on 01/15/2014 properly preserved, at 0.4 Deg. C and intact. These Samples received an Accutest job number of MC27657. 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:** MSV1025

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27652-9MS, MC27652-9MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification stdanard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceeded 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for Acrolein are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,2,4-Trichlorobenzene, 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC27652-9MS, MC27652-9MSD: The pH of the sample aliquot for VOA analysis was >2 at time of analysis.
- MSV1025-BS for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Calibration check stdanard MSV1025-CC1019 for acrolein, 2-chloroethyl vinyl ether exceeded 40% Difference (response biased high). Associated samples are non-detect for this compound.

Matrix AQ **Batch ID:** MSV1026

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC27677-1MS, MC27677-1MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Acrolein are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 1,2,4-Trichlorobenzene, 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV1026-BS for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Calibration check stdanard MSV1026-CC1019 for acrolein, 2-chloroethyl vinyl ether exceeded 40% Difference (response biased high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36543

- 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) MC27500-3MS, MC27500-3MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Dimethyl phthalate, Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- OP36543-MS/MSD Recovery(s) for Dimethyl phthalate, Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- RPD(s) for MSD for Dimethyl phthalate are outside control limits for sample OP36543-MSD. Blank Spike meets program technical requirements.
- MC27657-1: Confirmation run.
- MC27657-1 for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference.
- MC27657-1 for 2-Fluorophenol, Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- MC27657-3 for 2,4,6-Tribromophenol, Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Matrix AQ	Batch ID: OP36620

- 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) MC27500-15MS, MC27500-15MSD were used as the QC samples indicated.
- OP36620-BS/MSD Recovery(s) for 4-Nitrophenol are outside control limits. Blank Spike meets program technical requirements.
- MC27657-3: Confirmation run.
- MC27657-3 for Phenol-d5, 2-Fluorophenol, 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- OP36620-MS/MSD for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference.
- MC27657-1 for Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- OP36620-BS/MS/MSD for bis(2-Chloroisopropyl)ether: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36544

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-4MS, MC27500-4MSD 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: OP36542

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-1MS, MC27500-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP36542-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(MC27657).

Summary of Hits

Job Number: MC27657
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/14/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27657-1	MW1-ROX-011414					
Methyl Tert Butyl Ether		1.8	1.0	0.43	ug/l	SW846 8260C
Phenanthrene		0.031 J	0.053	0.013	ug/l	SW846 8270D BY SIM
MC27657-2	MW9-ROX-011414-EB					
No hits reported in this sample.						
MC27657-3	MW9-ROX-011414					
No hits reported in this sample.						
MC27657-4	TB-ROX-011414-HCL					
Acetone		4.6 J	10	2.8	ug/l	SW846 8260C
MC27657-5	TB-ROX-011414-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27157.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzeue	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disnlfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethaue	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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 fouud in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.8	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Ceutral 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	97%		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
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E = Indicates value exceeds calibration range
J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17416.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
Run #2 [a]	R36590.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	940 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	3% [b]	2% [b]	15-110%
4165-62-2	Phenol-d5	6% [b]	5% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	44%	12% [c]	15-110%
4165-60-0	Nitrobenzene-d5	75%	71%	30-130%
321-60-8	2-Fluorobiphenyl	80%	57%	30-130%
1718-51-0	Terphenyl-d14	97%	79%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
(c) Ontside control limits due to possible matrix interference.

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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:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36571.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346
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)anthraceue	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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.031	0.053	0.013	ug/l	J
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	71%		30-130%
321-60-8	2-Fluorobiphenyl	58%		30-130%
1718-51-0	Terphenyl-d14	74%		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:	MW1-ROX-011414		
Lab Sample ID:	MC27657-1	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB53823.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	74%		36-173%
460-00-4	Bromofluorobenzene (S)	84%		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-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27158.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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 componnd

Report of Analysis

Client Sample ID:	MW9-ROX-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		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	

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
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Report of Analysis

Client Sample ID:	MW9-ROX-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36591.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Metbylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl beuzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	29%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	42%		15-110%
4165-60-0	Nitrobenzene-d5	53%		30-130%
321-60-8	2-Fluorobiphenyl	39%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

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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:	MW9-ROX-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36572.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346
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-Methylnaphthaleue	ND	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	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	54%		30-130%
321-60-8	2-Fluorobiphenyl	40%		30-130%
1718-51-0	Terphenyl-d14	74%		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:	MW9-ROX-011414-EB		
Lab Sample ID:	MC27657-2	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB53824.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	61%		36-173%
460-00-4	Bromofluorobenzene (S)	71%		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-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27159.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzeue	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbou disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorohenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	MW9-ROX-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36592.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
Run #2 [a]	W17417.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2	930 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromopheuyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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:	MW9-ROX-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	UJ
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	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	1% [b]	2% [b]	15-110%
4165-62-2	Phenol-d5	4% [b]	5% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	3% [b]	7% [b]	15-110%
4165-60-0	Nitrobenzene-d5	80%	74%	30-130%
321-60-8	2-Fluorobiphenyl	64%	77%	30-130%
1718-51-0	Terphenyl-d14	83%	93%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/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:	MW9-ROX-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36573.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346
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	Fluorantbene	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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	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	81%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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:	MW9-ROX-011414		
Lab Sample ID:	MC27657-3	Date Sampled:	01/14/14
Matrix:	AQ - Ground Water	Date Received:	01/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB53825.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
Run #2							

	Initial Volume	Final Volume
Run #1	34.7 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	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	67%		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:	TB-ROX-011414-HCL		
Lab Sample ID:	MC27657-4	Date Sampled:	01/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27126.D	1	01/16/14	AMY	n/a	n/a	MSV1025
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	4.6	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011414-HCL		
Lab Sample ID:	MC27657-4	Date Sampled:	01/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Napbthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylhenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	TB-ROX-011414-HCL		
Lab Sample ID:	MC27657-4	Date Sampled:	01/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/15/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	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	

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-011414-ST		
Lab Sample ID:	MC27657-5	Date Sampled:	01/14/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/15/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB53826.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
Run #2							

	Initial Volume	Final Volume
Run #1	35.2 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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	63%		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

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 (506-481-6200))
☐ SPL (_____)
Lab Vendor # (_____)

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SOBCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 1/14/14

PAGE: 1 of 1

CAMPLING COMPANY: URS CORPORATION

CO CODE:

SITE ADDRESS (Street and City): 900 South Central Ave, ROXANA

State: IL

GLOBAL ID NO:

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST LOUIS, MO 63110

FOR DELIVERABLE TO (Name, Company, Office Location):

PHONE NO:

E-MAIL:

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562973.03001

PROJECT CONTACT (Planning or PM Report): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100

FAX: 314-429-0462

BILL TO CONTACT EMAIL: bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

SAMPLER NAME(S) (Print): D Mattingly, L. Rathnow

LAB USE ONLY: mc27657

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ CA - 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
☐ EDD NOT NEEDED
☑ RECEIPT 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	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW1-ROX-011414	1/14/14	1435	Water	2			2	2	6	X	X	X	X	0	
-2	MW9-ROX-011414-EB		1455		2			2	2	6	X	X	X	X		
-3	MW9-ROX-011414		1530		2			2	2	6	X	X	X	X		
-4	TB-ROX-011414-HCL		0000		2					2	X					
-5	TB-ROX-011414-ST		0000						2	2		X				
																19A, 3A1,

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/14/14	1700
FCOX	[signature]	1-15-14	1530

0.4°C

MC27657: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27657 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/15/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun		
3. Cooler media:	Ice (bag)		

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

5

MC27657: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27657

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27657-1 Collected: 14-JAN-14 14:35 By: MW1-ROX-011414				Received: 15-JAN-14	By:	
MC27657-1	SW846 8011	17-JAN-14 04:44	CZ	16-JAN-14	MR	V8011SL
MC27657-1	SW846 8260C	17-JAN-14 12:40	AMY			V8260SL+
MC27657-1	SW846 8270D BY SIM	20-JAN-14 12:18	KR	16-JAN-14	FC	B8270SIMSL
MC27657-1	SW846 8270D	21-JAN-14 09:54	KR	16-JAN-14	FC	AB8270SL+
MC27657-1	SW846 8270D	28-JAN-14 17:32	KR	21-JAN-14	MEW	AB8270SL+
MC27657-2 Collected: 14-JAN-14 14:55 By: MW9-ROX-011414-EB				Received: 15-JAN-14	By:	
MC27657-2	SW846 8011	17-JAN-14 05:08	CZ	16-JAN-14	MR	V8011SL
MC27657-2	SW846 8260C	17-JAN-14 13:06	AMY			V8260SL+
MC27657-2	SW846 8270D BY SIM	20-JAN-14 12:41	KR	16-JAN-14	FC	B8270SIMSL
MC27657-2	SW846 8270D	21-JAN-14 10:17	KR	16-JAN-14	FC	AB8270SL+
MC27657-3 Collected: 14-JAN-14 15:30 By: MW9-ROX-011414				Received: 15-JAN-14	By:	
MC27657-3	SW846 8011	17-JAN-14 05:32	CZ	16-JAN-14	MR	V8011SL
MC27657-3	SW846 8260C	17-JAN-14 13:33	AMY			V8260SL+
MC27657-3	SW846 8270D BY SIM	20-JAN-14 13:04	KR	16-JAN-14	FC	B8270SIMSL
MC27657-3	SW846 8270D	21-JAN-14 10:40	KR	16-JAN-14	FC	AB8270SL+
MC27657-3	SW846 8270D	28-JAN-14 17:56	KR	21-JAN-14	MEW	AB8270SL+
MC27657-4 Collected: 14-JAN-14 00:00 By: TB-ROX-011414-HCL				Received: 15-JAN-14	By:	
MC27657-4	SW846 8260C	16-JAN-14 13:03	AMY			V8260SL+
MC27657-5 Collected: 14-JAN-14 00:00 By: TB-ROX-011414-ST				Received: 15-JAN-14	By:	
MC27657-5	SW846 8011	17-JAN-14 05:57	CZ	16-JAN-14	MR	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/15/14

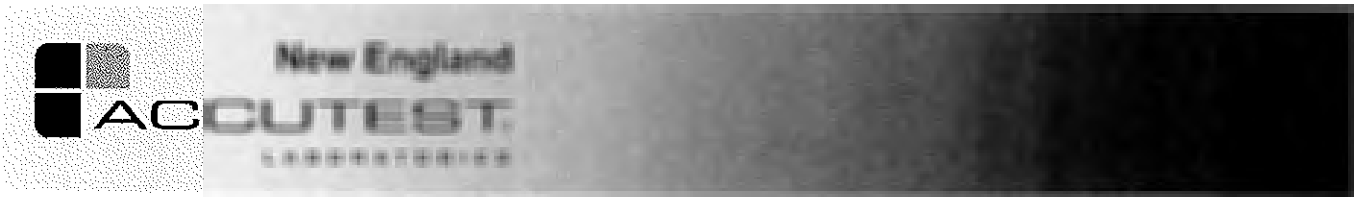
Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27657-1.1	Walk In Ref #22	Thomas Abruzzise	01/21/14 16:11	Retrieve from Storage
MC27657-1.2	Walk In Ref #22	Michael Rolo	01/16/14 09:10	Retrieve from Storage
MC27657-1.2	Michael Rolo		01/17/14 06:53	Depleted
MC27657-1.3	VOC Ref #3	Amy Min Yang	01/16/14 12:05	Retrieve from Storage
MC27657-1.3	Amy Min Yang	GCMSV	01/16/14 12:05	Load on Instrument
MC27657-1.3	GCMSV	Amy Min Yang	01/17/14 11:02	Unload from Instrument
MC27657-1.3	Amy Min Yang	VOC Ref #3	01/17/14 11:02	Return to Storage
MC27657-1.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27657-1.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27657-1.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27657-1.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27657-1.6	VOC Ref #3	Michael Rolo	01/16/14 06:54	Retrieve from Storage
MC27657-1.6	Michael Rolo		01/17/14 06:53	Depleted
MC27657-2.1	Walk In Ref #22	Michael Rolo	01/16/14 09:10	Retrieve from Storage
MC27657-2.1	Michael Rolo		01/17/14 06:53	Depleted
MC27657-2.3	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27657-2.3	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27657-2.3	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27657-2.3	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27657-2.4	VOC Ref #3	Amy Min Yang	01/16/14 12:05	Retrieve from Storage
MC27657-2.4	Amy Min Yang	GCMSV	01/16/14 12:05	Load on Instrument
MC27657-2.4	GCMSV	Amy Min Yang	01/17/14 11:02	Unload from Instrument
MC27657-2.4	Amy Min Yang	VOC Ref #3	01/17/14 11:02	Return to Storage
MC27657-2.6	VOC Ref #3	Michael Rolo	01/16/14 06:54	Retrieve from Storage
MC27657-2.6	Michael Rolo		01/17/14 06:53	Depleted
MC27657-3.1	Walk In Ref #22	Michael Rolo	01/16/14 09:10	Retrieve from Storage
MC27657-3.1	Michael Rolo		01/17/14 06:53	Depleted
MC27657-3.2	Walk In Ref #22	Thomas Abruzzise	01/21/14 16:11	Retrieve from Storage
MC27657-3.3	VOC Ref #3	Amy Min Yang	01/16/14 12:05	Retrieve from Storage
MC27657-3.3	Amy Min Yang	GCMSV	01/16/14 12:05	Load on Instrument
MC27657-3.3	GCMSV	Amy Min Yang	01/17/14 11:02	Unload from Instrument
MC27657-3.3	Amy Min Yang	VOC Ref #3	01/17/14 11:02	Return to Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/15/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27657-3.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27657-3.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27657-3.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27657-3.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27657-3.5	VOC Ref #3	Michael Rolo	01/16/14 06:54	Retrieve from Storage
MC27657-3.5	Michael Rolo		01/17/14 06:53	Depleted
MC27657-4.1	VOC Ref #3	Amy Min Yang	01/16/14 12:05	Retrieve from Storage
MC27657-4.1	Amy Min Yang	GCMSV	01/16/14 12:05	Load on Instrument
MC27657-4.1	GCMSV	Amy Min Yang	01/17/14 11:02	Unload from Instrument
MC27657-4.1	Amy Min Yang	VOC Ref #3	01/17/14 11:02	Return to Storage
MC27657-5.2	VOC Ref #3	Michael Rolo	01/16/14 06:54	Retrieve from Storage
MC27657-5.2	Michael Rolo		01/17/14 06:53	Depleted



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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-MB	V27124.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-MB	V27124.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-MB	V27124.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	70-130%
2037-26-5	Toluene-D8	98%	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	

6.1.1

6

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotolueue	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobeuzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropaue	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbeuzeue	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzeue	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	98%	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	

6.1.2

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-BS	V27121.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	42.1	84	70-130
107-02-8	Acrolein	50	75.5	151* a	70-130
107-13-1	Acrylonitrile	100	99.1	99	70-130
71-43-2	Benzene	50	52.3	105	70-130
108-86-1	Bromobenzene	50	55.4	111	70-130
74-97-5	Bromochloromethane	50	52.3	105	70-130
75-27-4	Bromodichloromethane	50	57.8	116	70-130
75-25-2	Bromoform	50	44.6	89	70-130
74-83-9	Bromomethane	50	47.5	95	70-130
78-93-3	2-Butanone (MEK)	50	41.0	82	70-130
104-51-8	n-Butylbenzene	50	58.7	117	70-130
135-98-8	sec-Butylbenzene	50	59.4	119	70-130
98-06-6	tert-Butylbenzene	50	59.8	120	70-130
75-15-0	Carbon disulfide	50	49.3	99	70-130
56-23-5	Carbon tetrachloride	50	60.1	120	70-130
108-90-7	Chlorobenzene	50	46.7	93	70-130
75-00-3	Chloroethane	50	57.1	114	70-130
110-75-8	2-Chloroethyl vinyl ether	50	147	294* b	70-130
67-66-3	Chloroform	50	51.5	103	70-130
74-87-3	Chloromethane	50	51.5	103	70-130
95-49-8	o-Chlorotoluene	50	54.3	109	70-130
106-43-4	p-Chlorotoluene	50	56.0	112	70-130
124-48-1	Dibromochloromethane	50	57.9	116	70-130
95-50-1	1,2-Dichlorobenzene	50	50.4	101	70-130
541-73-1	1,3-Dichlorobenzene	50	51.4	103	70-130
106-46-7	1,4-Dichlorobenzene	50	51.1	102	70-130
75-71-8	Dichlorodifluoromethane	50	52.7	105	70-130
75-34-3	1,1-Dichloroethane	50	53.6	107	70-130
107-06-2	1,2-Dichloroethane	50	55.1	110	70-130
75-35-4	1,1-Dichloroethene	50	54.9	110	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.5	105	70-130
156-60-5	trans-1,2-Dichloroethene	50	52.6	105	70-130
78-87-5	1,2-Dichloropropane	50	51.7	103	70-130
142-28-9	1,3-Dichloropropane	50	50.6	101	70-130
594-20-7	2,2-Dichloropropane	50	62.7	125	70-130
563-58-6	1,1-Dichloropropene	50	53.4	107	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-BS	V27121.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	49.1	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	51.9	104	70-130
123-91-1	1,4-Dioxane	250	229	92	70-130
97-63-2	Ethyl methacrylate	50	46.7	93	77-137
100-41-4	Ethylbenzene	50	53.6	107	70-130
87-68-3	Hexachlorobutadiene	50	61.1	122	70-130
591-78-6	2-Hexanone	50	41.2	82	70-130
98-82-8	Isopropylbenzene	50	60.4	121	70-130
99-87-6	p-Isopropyltoluene	50	57.9	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	57.3	115	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.5	107	70-130
74-95-3	Methylene bromide	50	52.4	105	70-130
75-09-2	Methylene chloride	50	49.0	98	70-130
91-20-3	Naphthalene	50	55.7	111	70-130
103-65-1	n-Propylbenzene	50	57.9	116	70-130
100-42-5	Styrene	50	48.9	98	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	54.0	108	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.3	103	70-130
127-18-4	Tetrachloroethene	50	54.1	108	70-130
108-88-3	Toluene	50	55.9	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	63.5	127	70-130
120-82-1	1,2,4-Trichlorobenzene	50	63.6	127	70-130
71-55-6	1,1,1-Trichloroethane	50	58.5	117	70-130
79-00-5	1,1,2-Trichloroethane	50	51.3	103	70-130
79-01-6	Trichloroethene	50	54.7	109	70-130
75-69-4	Trichlorofluoromethane	50	58.4	117	70-130
96-18-4	1,2,3-Trichloropropane	50	56.2	112	70-130
95-63-6	1,2,4-Trimethylbenzene	50	59.3	119	70-130
108-67-8	1,3,5-Trimethylbenzene	50	60.2	120	70-130
108-05-4	Vinyl Acetate	50	54.2	108	70-130
75-01-4	Vinyl chloride	50	44.7	89	70-130
	m,p-Xylene	100	89.3	89	70-130
95-47-6	o-Xylene	50	45.1	90	70-130
1330-20-7	Xylene (total)	150	134	89	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1025-BS	V27121.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.4	105	70-130
107-02-8	Acrolein	50	74.0	148* a	70-130
107-13-1	Acrylonitrile	100	93.9	94	70-130
71-43-2	Benzene	50	53.7	107	70-130
108-86-1	Bromobenzene	50	54.7	109	70-130
74-97-5	Bromochloromethane	50	52.5	105	70-130
75-27-4	Bromodichloromethane	50	54.2	108	70-130
75-25-2	Bromoform	50	44.0	88	70-130
74-83-9	Bromomethane	50	44.1	88	70-130
78-93-3	2-Butanone (MEK)	50	49.1	98	70-130
104-51-8	n-Butylbenzene	50	58.3	117	70-130
135-98-8	sec-Butylbenzene	50	59.5	119	70-130
98-06-6	tert-Butylbenzene	50	57.4	115	70-130
75-15-0	Carbon disulfide	50	50.1	100	70-130
56-23-5	Carbon tetrachloride	50	55.5	111	70-130
108-90-7	Chlorobenzene	50	48.0	96	70-130
75-00-3	Chloroethane	50	53.3	107	70-130
110-75-8	2-Chloroethyl vinyl ether	50	100	200* b	70-130
67-66-3	Chloroform	50	49.3	99	70-130
74-87-3	Chloromethane	50	45.8	92	70-130
95-49-8	o-Chlorotoluene	50	53.8	108	70-130
106-43-4	p-Chlorotoluene	50	54.5	109	70-130
124-48-1	Dibromochloromethane	50	56.5	113	70-130
95-50-1	1,2-Dichlorobenzene	50	50.2	100	70-130
541-73-1	1,3-Dichlorobenzene	50	51.6	103	70-130
106-46-7	1,4-Dichlorobenzene	50	51.5	103	70-130
75-71-8	Dichlorodifluoromethane	50	46.5	93	70-130
75-34-3	1,1-Dichloroethane	50	52.0	104	70-130
107-06-2	1,2-Dichloroethane	50	48.8	98	70-130
75-35-4	1,1-Dichloroethene	50	55.6	111	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.4	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.0	106	70-130
78-87-5	1,2-Dichloropropane	50	51.2	102	70-130
142-28-9	1,3-Dichloropropane	50	51.4	103	70-130
594-20-7	2,2-Dichloropropane	50	60.7	121	70-130
563-58-6	1,1-Dichloropropene	50	53.2	106	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.9	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.7	99	70-130
123-91-1	1,4-Dioxane	250	239	96	70-130
97-63-2	Ethyl methacrylate	50	46.1	92	77-137
100-41-4	Ethylbenzene	50	54.6	109	70-130
87-68-3	Hexachlorobutadiene	50	59.8	120	70-130
591-78-6	2-Hexanone	50	47.7	95	70-130
98-82-8	Isopropylbenzene	50	60.3	121	70-130
99-87-6	p-Isopropyltoluene	50	58.6	117	70-130
1634-04-4	Methyl Tert Butyl Ether	50	54.8	110	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.0	100	70-130
74-95-3	Methylene bromide	50	50.2	100	70-130
75-09-2	Methylene chloride	50	49.7	99	70-130
91-20-3	Naphthalene	50	52.8	106	70-130
103-65-1	n-Propylbenzene	50	57.8	116	70-130
100-42-5	Styrene	50	51.1	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	53.0	106	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-130
127-18-4	Tetrachloroethene	50	55.3	111	70-130
108-88-3	Toluene	50	56.1	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	60.0	120	70-130
120-82-1	1,2,4-Trichlorobenzene	50	62.0	124	70-130
71-55-6	1,1,1-Trichloroethane	50	55.3	111	70-130
79-00-5	1,1,2-Trichloroethane	50	51.1	102	70-130
79-01-6	Trichloroethene	50	54.5	109	70-130
75-69-4	Trichlorofluoromethane	50	51.2	102	70-130
96-18-4	1,2,3-Trichloropropane	50	53.4	107	70-130
95-63-6	1,2,4-Trimethylbenzene	50	58.5	117	70-130
108-67-8	1,3,5-Trimethylbenzene	50	59.5	119	70-130
108-05-4	Vinyl Acetate	50	50.6	101	70-130
75-01-4	Vinyl chloride	50	41.8	84	70-130
	m,p-Xylene	100	92.9	93	70-130
95-47-6	o-Xylene	50	46.6	93	70-130
1330-20-7	Xylene (total)	150	140	93	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	99%	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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27652-9MS [a]	V27141.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9MSD [a]	V27142.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9 [a]	V27127.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	MC27652-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	146	58* [b]	151	60* [b]	3	70-130/30
107-02-8	Acrolein	ND		250	323	129	326	130	1	70-130/30
107-13-1	Acrylonitrile	ND		500	493	99	491	98	0	70-130/30
71-43-2	Benzene	ND		250	274	110	270	108	1	70-130/30
108-86-1	Bromobenzene	ND		250	286	114	287	115	0	70-130/30
74-97-5	Bromochloromethane	ND		250	270	108	271	108	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	274	110	270	108	1	70-130/30
75-25-2	Bromoform	ND		250	225	90	227	91	1	70-130/30
74-83-9	Bromomethane	ND		250	223	89	220	88	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	184	74	186	74	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	304	122	303	121	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	313	125	313	125	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	297	119	295	118	1	70-130/30
75-15-0	Carbon disulfide	ND		250	227	91	225	90	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	270	108	262	105	3	70-130/30
108-90-7	Chlorobenzene	ND		250	249	100	248	99	0	70-130/30
75-00-3	Chloroethane	ND		250	272	109	265	106	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	585	234* [b]	510	204* [b]	14	70-130/30
67-66-3	Chloroform	ND		250	250	100	248	99	1	70-130/30
74-87-3	Chloromethane	ND		250	249	100	247	99	1	70-130/30
95-49-8	o-Chlorotoluene	ND		250	280	112	278	111	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	283	113	281	112	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	292	117	292	117	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	262	105	265	106	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	269	108	267	107	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	269	108	267	107	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	247	99	240	96	3	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	264	106	261	104	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	239	96	238	95	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	274	110	269	108	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	276	110	275	110	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	269	108	265	106	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	266	106	263	105	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	268	107	269	108	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	289	116	286	114	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	269	108	260	104	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27652-9MS [a]	V27141.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9MSD [a]	V27142.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9 [a]	V27127.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Compound	MC27652-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	250	100	248	99	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	254	102	253	101	0	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1180	94	1250	100	6	70-130/30
97-63-2	Ethyl methacrylate	ND		250	247	99	247	99	0	72-139/30
100-41-4	Ethylbenzene	ND		250	288	115	284	114	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	293	117	308	123	5	70-130/30
591-78-6	2-Hexanone	ND		250	197	79	199	80	1	70-130/30
98-82-8	Isopropylbenzene	ND		250	318	127	316	126	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	300	120	302	121	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	293	117	296	118	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	272	109	267	107	2	70-130/30
74-95-3	Methylene hromide	ND		250	253	101	252	101	0	70-130/30
75-09-2	Methylene chloride	ND		250	249	100	251	100	1	70-130/30
91-20-3	Naphthalene	ND		250	327	131* [b]	316	126	3	70-130/30
103-65-1	n-Propylbenzene	ND		250	303	121	298	119	2	70-130/30
100-42-5	Styrene	ND		250	267	107	264	106	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	276	110	276	110	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	270	108	272	109	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	285	114	280	112	2	70-130/30
108-88-3	Toluene	0.99		250	288	115	285	114	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	285	114	321	128	12	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	319	128	334	134* [b]	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	276	110	273	109	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	266	106	262	105	2	70-130/30
79-01-6	Trichloroethene	ND		250	275	110	272	109	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	247	99	237	95	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	278	111	282	113	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	311	124	309	124	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	314	126	310	124	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	262	105	262	105	0	70-130/30
75-01-4	Vinyl chloride	ND		250	221	88	216	86	2	70-130/30
	m,p-Xylene	ND		500	478	96	475	95	1	70-130/30
95-47-6	o-Xylene	ND		250	242	97	243	97	0	70-130/30
1330-20-7	Xylene (total)	ND		750	720	96	718	96	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27652-9MS [a]	V27141.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9MSD [a]	V27142.D	5	01/16/14	AMY	n/a	n/a	MSV1025
MC27652-9 [a]	V27127.D	1	01/16/14	AMY	n/a	n/a	MSV1025

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

MC27657-4

CAS No.	Surrogate Recoveries	MS	MSD	MC27652-9	Limits
1868-53-7	Dibromofluoromethane	92%	93%	107%	70-130%
2037-26-5	Toluene-D8	98%	97%	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	99%	105%	70-130%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.
(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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	17.4		50	46.6	58* [a]	47.4	60* [a]	2	70-130/30
107-02-8	Acrolein	ND		50	65.7	131* [a]	67.8	136* [a]	3	70-130/30
107-13-1	Acrylonitrile	ND		100	108	108	107	107	1	70-130/30
71-43-2	Benzene	ND		50	56.9	114	56.0	112	2	70-130/30
108-86-1	Bromobenzene	ND		50	57.9	116	57.3	115	1	70-130/30
74-97-5	Bromochloromethane	ND		50	55.8	112	55.0	110	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	56.7	113	55.0	110	3	70-130/30
75-25-2	Bromoform	ND		50	44.9	90	45.6	91	2	70-130/30
74-83-9	Bromomethane	ND		50	47.2	94	45.9	92	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	38.0	76	37.9	76	0	70-130/30
104-51-8	n-Butylbenzene	ND		50	61.8	124	60.7	121	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	63.1	126	62.1	124	2	70-130/30
98-06-6	tert-Butylbenzene	ND		50	61.0	122	59.2	118	3	70-130/30
75-15-0	Carbon disulfide	ND		50	54.5	109	52.9	106	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	58.4	117	56.9	114	3	70-130/30
108-90-7	Chlorobenzene	ND		50	50.2	100	49.8	100	1	70-130/30
75-00-3	Chloroethane	ND		50	57.8	116	55.2	110	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		50	53.0	106	51.5	103	3	70-130/30
74-87-3	Chloromethane	ND		50	51.0	102	49.2	98	4	70-130/30
95-49-8	o-Chlorotoluene	ND		50	56.6	113	55.3	111	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	57.8	116	56.1	112	3	70-130/30
124-48-1	Dibromochloromethane	ND		50	58.5	117	58.7	117	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	52.9	106	52.2	104	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	54.5	109	53.6	107	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	54.0	108	53.3	107	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	60.0	120	57.6	115	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	56.5	113	54.9	110	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	51.8	104	51.0	102	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	61.7	123	59.4	119	4	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	57.8	116	56.8	114	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	57.4	115	56.2	112	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.6	109	53.4	107	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	53.7	107	53.8	108	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	63.8	128	62.4	125	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	57.8	116	55.5	111	4	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	51.0	102	50.3	101	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.3	105	52.0	104	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	192	77	231	92	18	70-130/30
97-63-2	Ethyl methacrylate	ND		50	51.4	103	50.8	102	1	72-139/30
100-41-4	Ethylbenzene	ND		50	57.3	115	56.2	112	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	61.2	122	60.9	122	0	70-130/30
591-78-6	2-Hexanone	ND		50	41.2	82	41.6	83	1	70-130/30
98-82-8	Isopropylbenzene	ND		50	64.4	129	63.0	126	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	61.1	122	60.0	120	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	58.9	118	60.3	121	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	56.8	114	57.0	114	0	70-130/30
74-95-3	Methylene bromide	ND		50	52.9	106	52.0	104	2	70-130/30
75-09-2	Methylene chloride	ND		50	54.4	109	53.2	106	2	70-130/30
91-20-3	Naphthalene	ND		50	57.0	114	61.1	122	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	61.0	122	59.8	120	2	70-130/30
100-42-5	Styrene	ND		50	53.1	106	51.9	104	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.0	112	55.0	110	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	54.6	109	55.0	110	1	70-130/30
127-18-4	Tetrachloroethene	ND		50	58.2	116	57.6	115	1	70-130/30
108-88-3	Toluene	ND		50	59.6	119	58.1	116	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	59.4	119	64.5	129	8	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	65.2	130	66.0	132* [a]	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	58.6	117	56.7	113	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	53.8	108	53.3	107	1	70-130/30
79-01-6	Trichloroethene	ND		50	57.5	115	56.0	112	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	54.9	110	52.0	104	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	57.8	116	57.0	114	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	62.2	124	60.3	121	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	63.3	127	62.2	124	2	70-130/30
108-05-4	Vinyl Acetate	ND		50	55.2	110	53.7	107	3	70-130/30
75-01-4	Vinyl chloride	ND		50	47.0	94	45.2	90	4	70-130/30
	m,p-Xylene	ND		100	96.2	96	95.8	96	0	70-130/30
95-47-6	o-Xylene	ND		50	48.4	97	48.3	97	0	70-130/30
1330-20-7	Xylene (total)	ND		150	145	97	144	96	1	70-130/30

* = Ontside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27657-1, MC27657-2, MC27657-3

CAS No.	Surrogate Recoveries	MS	MSD	MC27677-1	Limits
1868-53-7	Dibromofluoromethane	95%	94%	93%	70-130%
2037-26-5	Toluene-D8	98%	98%	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	98%	108%	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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1025-CC1019	Injection Date:	01/16/14
Lab File ID:	V27120.D	Injection Time:	10:26
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	538265	6.57	667967	7.75	370408	11.08	406477	13.29	157364	3.53
Upper Limit [a]	1076530	7.07	1335934	8.25	740816	11.58	812954	13.79	314728	4.03
Lower Limit [b]	269133	6.07	333984	7.25	185204	10.58	203239	12.79	78682	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
MSV1025-BS	542731	6.57	685449	7.75	376796	11.08	401929	13.29	164214	3.53
MSV1025-MB	424929	6.58	574864	7.76	317536	11.09	306365	13.30	133105	3.53
ZZZZZZ	421823	6.57	567399	7.75	322797	11.08	303560	13.30	128832	3.52
MC27657-4	419490	6.58	564440	7.75	315295	11.09	300544	13.30	127864	3.52
MC27652-9	424345	6.58	567244	7.76	315930	11.09	303465	13.30	150141	3.53
ZZZZZZ	399860	6.58	539285	7.76	305852	11.09	289167	13.30	175925	3.53
ZZZZZZ	409808	6.58	540734	7.76	308559	11.09	305674	13.30	170553	3.54
ZZZZZZ	405932	6.58	554172	7.75	317552	11.08	304430	13.30	157476	3.53
ZZZZZZ	451153	6.58	587634	7.76	341419	11.09	329068	13.30	137954	3.54
ZZZZZZ	508905	6.57	655823	7.75	368965	11.08	368150	13.30	175300	3.53
ZZZZZZ	533873	6.57	691688	7.75	386594	11.08	375513	13.30	160344	3.53
ZZZZZZ	586690	6.58	755269	7.76	408777	11.09	445830	13.30	193570	3.53
ZZZZZZ	602667	6.58	782192	7.76	424175	11.09	438698	13.30	199365	3.53
ZZZZZZ	635097	6.58	821800	7.76	440158	11.08	450315	13.30	264365	3.53
ZZZZZZ	663085	6.58	852043	7.76	455300	11.08	466664	13.30	215366	3.53
ZZZZZZ	667177	6.58	868581	7.75	471730	11.08	484517	13.29	210304	3.52
MC27652-9MS [c]	731429	6.57	938281	7.75	498019	11.08	541252	13.29	227645	3.51
MC27652-9MSD [c]	731353	6.58	948671	7.75	499194	11.08	540671	13.29	231462	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) The pH of the sample aliquot for VOA analysis was >2 at time of analysis.

6.4.1

Volatile Internal Standard Area Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1026-CC1019	Injection Date:	01/17/14
Lab File ID:	V27151.D	Injection Time:	10:03
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	696176	6.57	881560	7.75	470974	11.08	518286	13.29	204664	3.52
Upper Limit [a]	1392352	7.07	1763120	8.25	941948	11.58	1036572	13.79	409328	4.02
Lower Limit [b]	348088	6.07	440780	7.25	235487	10.58	259143	12.79	102332	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
MSV1026-BS	696176	6.57	881560	7.75	470974	11.08	518286	13.29	204664	3.52
MSV1026-MB	552672	6.57	735971	7.75	401640	11.08	383324	13.29	175692	3.53
ZZZZZZ	560200	6.58	748104	7.75	405124	11.08	391049	13.29	173228	3.53
MC27657-1	553382	6.57	738312	7.75	395462	11.08	385056	13.29	187209	3.52
MC27657-2	522672	6.57	709848	7.75	384437	11.08	367842	13.29	175812	3.52
MC27657-3	532381	6.57	712527	7.75	384060	11.08	369070	13.29	172316	3.52
MC27677-1	568546	6.57	705055	7.75	386223	11.08	362525	13.29	186912	3.52
ZZZZZZ	520549	6.57	683231	7.75	367603	11.08	349643	13.29	167449	3.52
ZZZZZZ	505653	6.57	663654	7.75	366741	11.08	346479	13.29	165839	3.52
ZZZZZZ	471314	6.58	637653	7.75	350063	11.08	335874	13.29	158406	3.53
ZZZZZZ	570475	6.58	715540	7.75	396882	11.08	406683	13.29	241219	3.53
ZZZZZZ	591947	6.57	764004	7.75	420862	11.08	420783	13.29	236760	3.53
MC27677-1MS	653801	6.57	839341	7.75	450982	11.08	482952	13.29	201341	3.53
MC27677-1MSD	675317	6.58	863165	7.75	458865	11.08	496178	13.29	215067	3.53
ZZZZZZ	640502	6.57	830451	7.75	438575	11.08	445890	13.29	192210	3.52
ZZZZZZ	618725	6.58	823034	7.75	429141	11.08	420869	13.29	210337	3.53
ZZZZZZ	584500	6.57	782739	7.75	410706	11.08	399493	13.29	196199	3.52
ZZZZZZ	576053	6.58	767570	7.75	410750	11.08	402216	13.29	191035	3.53
ZZZZZZ	564829	6.58	757880	7.75	404152	11.08	387626	13.29	188885	3.52
ZZZZZZ	547759	6.58	734916	7.75	392286	11.08	383259	13.29	184394	3.53
ZZZZZZ	616823	6.57	780852	7.75	443429	11.08	436536	13.29	178953	3.52
ZZZZZZ	579362	6.57	764293	7.75	419167	11.08	419593	13.29	190448	3.52
ZZZZZZ	605802	6.57	810174	7.75	435376	11.08	422406	13.29	200980	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.

Volatile Surrogate Recovery Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27657-1	V27157.D	102.0	97.0	105.0
MC27657-2	V27158.D	102.0	97.0	104.0
MC27657-3	V27159.D	102.0	97.0	103.0
MC27657-4	V27126.D	108.0	99.0	105.0
MC27652-9MS	V27141.D	92.0	98.0	98.0
MC27652-9MSD	V27142.D	93.0	97.0	99.0
MC27677-1MS	V27166.D	95.0	98.0	99.0
MC27677-1MSD	V27167.D	94.0	98.0	98.0
MSV1025-BS	V27121.D	98.0	99.0	100.0
MSV1025-MB	V27124.D	107.0	98.0	105.0
MSV1026-BS	V27151.D	94.0	98.0	99.0
MSV1026-MB	V27155.D	100.0	98.0	104.0

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

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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-MB	R36585.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-u-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-MB	R36585.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophornne	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	70%	15-110%
4165-60-0	Nitrobenzene-d5	87%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	82%	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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MB	W17395.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MB	W17395.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	71%	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	

Method Blank Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36544-MB	R36566.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27657-1, MC27657-2, MC27657-3

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	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
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	100%	15-110%
4165-60-0	Nitrobenzene-d5	88%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	76%	30-130%

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-BS	R36586.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.4	35	30-130
95-57-8	2-Chlorophenol	50	34.1	68	30-130
59-50-7	4-Chloro-3-methyl phenol	50	40.3	81	30-130
120-83-2	2,4-Dichlorophenol	50	37.0	74	30-130
105-67-9	2,4-Dimethylphenol	50	38.0	76	30-130
51-28-5	2,4-Dinitrophenol	50	35.3	71	30-130
534-52-1	4,6-Dinitro-o-cresol	50	39.2	78	30-130
95-48-7	2-Methylphenol	50	32.4	65	30-130
	3&4-Methylphenol	100	60.2	60	30-130
88-75-5	2-Nitrophenol	50	36.0	72	30-130
100-02-7	4-Nitrophenol	50	20.1	40	30-130
87-86-5	Pentachlorophenol	50	36.6	73	30-130
108-95-2	Phenol	50	16.2	32	30-130
95-95-4	2,4,5-Trichlorophenol	50	36.8	74	30-130
88-06-2	2,4,6-Trichlorophenol	50	36.4	73	30-130
62-53-3	Aniline	50	25.0	50	40-140
101-55-3	4-Bromophenyl phenyl ether	50	39.7	79	40-140
85-68-7	Butyl benzyl phthalate	50	40.1	80	40-140
100-51-6	Benzyl Alcohol	50	28.5	57	40-140
91-58-7	2-Chloronaphthalene	50	37.8	76	40-140
106-47-8	4-Chloroaniline	50	33.7	67	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	37.5	75	40-140
111-44-4	bis(2-Chloroethyl)ether	50	39.4	79	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	38.8	78	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	40.2	80	40-140
122-66-7	1,2-Diphenylhydrazine	50	48.3	97	40-140
121-14-2	2,4-Dinitrotoluene	50	40.9	82	40-140
606-20-2	2,6-Dinitrotoluene	50	37.3	75	40-140
91-94-1	3,3'-Dichlorobenzidine	50	35.4	71	40-140
132-64-9	Dibenzofuran	50	38.4	77	40-140
84-74-2	Di-n-butyl phthalate	50	37.8	76	40-140
117-84-0	Di-n-octyl phthalate	50	50.9	102	40-140
84-66-2	Diethyl phthalate	50	25.4	51	40-140
131-11-3	Dimethyl phthalate	50	7.9	16* a	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.3	97	40-140
118-74-1	Hexachlorobenzene	50	40.2	80	40-140

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-BS	R36586.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	13.0	26* [a]	40-140
67-72-1	Hexachloroethane	50	27.0	54	40-140
78-59-1	Isophorone	50	42.6	85	40-140
88-74-4	2-Nitroaniline	50	40.1	80	40-140
99-09-2	3-Nitroaniline	50	36.6	73	40-140
100-01-6	4-Nitroaniline	50	37.6	75	40-140
98-95-3	Nitrobenzene	50	42.7	85	40-140
62-75-9	n-Nitrosodimethylamine	50	24.6	49	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	45.0	90	40-140
86-30-6	N-Nitrosodiphenylamine	50	38.2	76	40-140
110-86-1	Pyridine	50	20.9	42	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	45%	15-110%
4165-62-2	Phenol-d5	30%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	15-110%
4165-60-0	Nitrobenzene-d5	83%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	75%	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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-BS	W17396.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

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	37.3	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	34.3	69	30-130
120-83-2	2,4-Dichlorophenol	50	36.9	74	30-130
105-67-9	2,4-Dimethylphenol	50	32.8	66	30-130
51-28-5	2,4-Dinitrophenol	50	31.3	63	30-130
534-52-1	4,6-Dinitro-o-cresol	50	43.3	87	30-130
95-48-7	2-Methylphenol	50	30.6	61	30-130
	3&4-Methylphenol	100	55.0	55	30-130
88-75-5	2-Nitrophenol	50	39.7	79	30-130
100-02-7	4-Nitrophenol	50	13.6	27* a	30-130
87-86-5	Pentachlorophenol	50	38.3	77	30-130
108-95-2	Phenol	50	16.4	33	30-130
95-95-4	2,4,5-Trichlorophenol	50	35.9	72	30-130
88-06-2	2,4,6-Trichlorophenol	50	37.8	76	30-130
62-53-3	Aniline	50	26.6	53	40-140
101-55-3	4-Bromophenyl phenyl ether	50	52.3	105	40-140
85-68-7	Butyl benzyl phthalate	50	43.0	86	40-140
100-51-6	Benzyl Alcohol	50	34.9	70	40-140
91-58-7	2-Chloronaphthalene	50	38.6	77	40-140
106-47-8	4-Chloroaniline	50	38.1	76	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	32.3	65	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.5	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	94.5	189* b	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.3	87	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.8	84	40-140
121-14-2	2,4-Dinitrotoluene	50	41.2	82	40-140
606-20-2	2,6-Dinitrotoluene	50	40.3	81	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.8	84	40-140
132-64-9	Dibenzofurau	50	39.5	79	40-140
84-74-2	Di-n-butyl phthalate	50	39.4	79	40-140
117-84-0	Di-n-octyl phthalate	50	41.5	83	40-140
84-66-2	Diethyl phthalate	50	37.0	74	40-140
131-11-3	Dimethyl phthalate	50	32.1	64	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.4	91	40-140
118-74-1	Hexachlorobenzene	50	53.5	107	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-BS	W17396.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	57.9	116	40-140
67-72-1	Hexachloroethane	50	30.6	61	40-140
78-59-1	Isophorone	50	40.4	81	40-140
88-74-4	2-Nitroaniline	50	39.6	79	40-140
99-09-2	3-Nitroaniline	50	37.1	74	40-140
100-01-6	4-Nitroaniline	50	37.2	74	40-140
98-95-3	Nitrobenzene	50	41.7	83	40-140
62-75-9	n-Nitrosodimethylamine	50	31.7	63	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.0	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	39.6	79	40-140
110-86-1	Pyridine	50	27.5	55	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	103%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

(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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36544-BS	R36567.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27657-1, MC27657-2, MC27657-3

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	32.1	64	40-140
120-12-7	Anthracene	50	41.9	84	40-140
56-55-3	Benzo(a)anthracene	50	51.0	102	40-140
50-32-8	Benzo(a)pyrene	50	37.1	74	40-140
205-99-2	Benzo(b)fluoranthene	50	42.1	84	40-140
191-24-2	Benzo(g,h,i)perylene	50	43.5	87	40-140
207-08-9	Benzo(k)fluoranthene	50	44.3	89	40-140
218-01-9	Chrysene	50	45.3	91	40-140
53-70-3	Dibenzo(a,h)anthracene	50	44.7	89	40-140
206-44-0	Fluoranthene	50	47.0	94	40-140
86-73-7	Fluorene	50	42.9	86	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	44.2	88	40-140
90-12-0	1-Methylnaphthalene	50	36.5	73	40-140
91-57-6	2-Methylnaphthalene	50	35.1	70	40-140
85-01-8	Phenanthrene	50	43.5	87	40-140
129-00-0	Pyrene	50	47.1	94	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	108%	15-110%
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	69%	30-130%
1718-51-0	Terphenyl-d14	70%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-MS	R36587.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
OP36543-MSD	R36588.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
MC27500-3	R36589.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	MC27500-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	16.1	32	17.0	34	5	30-130/20
95-57-8	2-Chlorophenol	ND		50	32.0	64	34.2	68	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	39.3	79	41.1	82	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	34.8	70	37.0	74	6	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	32.6	65	33.4	67	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	33.8	68	36.3	73	7	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	38.6	77	41.5	83	7	30-130/20
95-48-7	2-Methylphenol	ND		50	30.6	61	32.5	65	6	30-130/20
	3&4-Methylphenol	ND		100	57.1	57	60.9	61	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	33.8	68	35.9	72	6	30-130/20
100-02-7	4-Nitrophenol	ND		50	19.9	40	20.5	41	3	30-130/20
87-86-5	Pentachlorophenol	ND		50	35.6	71	37.5	75	5	30-130/20
108-95-2	Phenol	ND		50	15.5	31	16.6	33	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	35.6	71	38.2	76	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	34.8	70	37.3	75	7	30-130/20
62-53-3	Aniline	ND		50	24.7	49	25.8	52	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	41.7	83	42.3	85	1	40-140/20
85-68-7	Butyl henzyl phthalate	ND		50	43.0	86	43.7	87	2	40-140/20
100-51-6	Benzyl Alcohol	ND		50	27.8	56	30.0	60	8	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	38.6	77	40.4	81	5	40-140/20
106-47-8	4-Chloroaniline	ND		50	34.2	68	35.6	71	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	37.4	75	38.8	78	4	40-140/20
111-44-4	his(2-Chloroethyl)ether	ND		50	39.2	78	40.7	81	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	38.8	78	40.5	81	4	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	41.2	82	42.4	85	3	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	50.1	100	51.2	102	2	40-140/20
121-14-2	2,4-Dinitrotolnene	ND		50	41.7	83	42.5	85	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	39.0	78	39.8	80	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	40.0	80	40.5	81	1	40-140/20
132-64-9	Dibenzofuran	ND		50	39.2	78	40.2	80	3	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	40.0	80	40.8	82	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	53.5	107	53.7	107	0	40-140/20
84-66-2	Diethyl phthalate	ND		50	27.6	55	30.4	61	10	40-140/20
131-11-3	Dimethyl phthalate	ND		50	9.1	18* [a]	13.6	27* [a]	40* [a]	40-140/20
117-81-7	his(2-Ethylhexyl)phthalate	ND		50	51.3	103	52.3	105	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	41.6	83	43.1	86	4	40-140/20

* = Ontside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36543-MS	R36587.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
OP36543-MSD	R36588.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348
MC27500-3	R36589.D	1	01/21/14	KR	01/16/14	OP36543	MSR1348

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-2, MC27657-3

CAS No.	Compound	MC27500-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	13.6	27* [a]	15.0	30* [a]	10	40-140/20
67-72-1	Hexachloroethane	ND		50	28.9	58	29.9	60	3	40-140/20
78-59-1	Isophorone	ND		50	43.3	87	44.6	89	3	40-140/20
88-74-4	2-Nitroaniline	ND		50	41.0	82	41.7	83	2	40-140/20
99-09-2	3-Nitroaniline	ND		50	37.8	76	38.7	77	2	40-140/20
100-01-6	4-Nitroaniline	ND		50	39.0	78	39.4	79	1	40-140/20
98-95-3	Nitrobenzene	ND		50	42.9	86	43.7	87	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	23.6	47	25.2	50	7	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	46.2	92	47.8	96	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.1	80	41.3	83	3	40-140/20
110-86-1	Pyridine	ND		50	19.8	40	21.4	43	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-3	Limits
367-12-4	2-Fluorophenol	42%	45%	42%	15-110%
4165-62-2	Phenol-d5	29%	30%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	75%	79%	68%	15-110%
4165-60-0	Nitrobenzene-d5	80%	83%	80%	30-130%
321-60-8	2-Fluorobiphenyl	69%	71%	66%	30-130%
1718-51-0	Terphenyl-d14	79%	80%	86%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MS	W17397.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
OP36620-MSD	W17398.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
MC27500-15	W17399.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

CAS No.	Compound	MC27500-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	23.3	47	21.5	43	8	30-130/20
95-57-8	2-Chlorophenol	ND		50	39.5	79	39.5	79	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	36.4	73	37.7	75	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	39.8	80	39.5	79	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	35.5	71	35.7	71	1	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	35.1	70	34.3	69	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.7	95	47.6	95	0	30-130/20
95-48-7	2-Methylphenol	ND		50	33.8	68	33.4	67	1	30-130/20
	3&4-Methylphenol	ND		100	60.8	61	60.6	61	0	30-130/20
88-75-5	2-Nitrophenol	ND		50	43.2	86	43.7	87	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	15.3	31	14.5	29* [a]	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	41.4	83	41.7	83	1	30-130/20
108-95-2	Phenol	ND		50	18.2	36	17.7	35	3	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	39.6	79	38.6	77	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	40.3	81	40.4	81	0	30-130/20
62-53-3	Aniline	ND		50	28.8	58	28.7	57	0	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	55.3	111	54.8	110	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	46.6	93	45.4	91	3	40-140/20
100-51-6	Benzyl Alcohol	ND		50	37.1	74	36.9	74	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	40.5	81	40.6	81	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	40.2	80	40.2	80	0	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	34.2	68	34.3	69	0	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	48.6	97	48.4	97	0	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	102	204* [b]	102	204* [b]	0	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	47.3	95	46.8	94	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	44.4	89	44.2	88	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.0	88	43.6	87	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	42.8	86	43.5	87	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	44.9	90	43.9	88	2	40-140/20
132-64-9	Dibenzofuran	ND		50	42.3	85	42.6	85	1	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	42.5	85	41.5	83	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	46.1	92	44.6	89	3	40-140/20
84-66-2	Diethyl phthalate	ND		50	40.5	81	40.1	80	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	33.9	68	36.2	72	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	48.2	96	47.1	94	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	56.7	113	56.2	112	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MS	W17397.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
OP36620-MSD	W17398.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
MC27500-15	W17399.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27657-1

CAS No.	Compound	MC27500-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	59.7	119	61.1	122	2	40-140/20
67-72-1	Hexachloroethane	ND		50	32.6	65	33.7	67	3	40-140/20
78-59-1	Isophorone	ND		50	43.4	87	43.6	87	0	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.8	86	43.2	86	1	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.5	81	40.6	81	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	40.7	81	39.9	80	2	40-140/20
98-95-3	Nitrobenzene	ND		50	44.6	89	44.8	90	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	34.5	69	34.4	69	0	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.2	86	44.4	89	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	42.7	85	42.0	84	2	40-140/20
110-86-1	Pyridine	ND		50	29.3	59	29.2	58	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-15	Limits
367-12-4	2-Fluorophenol	50%	50%	41%	15-110%
4165-62-2	Phenol-d5	35%	34%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	111%* c	112%* c	91%	15-110%
4165-60-0	Nitrobenzene-d5	80%	81%	69%	30-130%
321-60-8	2-Fluorobiphenyl	81%	81%	70%	30-130%
1718-51-0	Terphenyl-d14	100%	97%	91%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.
(c) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36544-MS	R36568.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346
OP36544-MSD	R36569.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346
MC27500-4	R36570.D	1	01/20/14	KR	01/16/14	OP36544	MSR1346

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27657-1, MC27657-2, MC27657-3

CAS No.	Compound	MC27500-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	42.1	84	43.3	87	3	40-140/20
208-96-8	Acenaphthylene	ND		50	33.1	66	34.0	68	3	40-140/20
120-12-7	Anthracene	ND		50	43.7	87	44.4	89	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	53.6	107	54.4	109	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	38.6	77	39.2	78	2	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	43.4	87	45.6	91	5	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	45.0	90	45.4	91	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	44.3	89	45.7	91	3	40-140/20
218-01-9	Chrysene	ND		50	47.5	95	48.3	97	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.4	93	47.2	94	2	40-140/20
206-44-0	Fluoranthene	ND		50	49.4	99	50.2	100	2	40-140/20
86-73-7	Fluorene	ND		50	44.5	89	45.3	91	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.9	92	46.7	93	2	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	37.1	74	38.8	78	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	35.8	72	37.2	74	4	40-140/20
85-01-8	Phenanthrene	0.025	J	50	45.3	91	45.8	92	1	40-140/20
129-00-0	Pyrene	ND		50	49.5	99	50.3	101	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-4	Limits
367-12-4	2-Fluorophenol	43%	45%	43%	15-110%
4165-62-2	Phenol-d5	29%	30%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	104%	108%	97%	15-110%
4165-60-0	Nitrobenzene-d5	81%	84%	81%	30-130%
321-60-8	2-Fluorobiphenyl	70%	73%	67%	30-130%
1718-51-0	Terphenyl-d14	73%	75%	79%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1346-CC1261	Injection Date:	01/20/14
Lab File ID:	R36565.D	Injection Time:	10:00
Instrument ID:	GCMSR	Method:	SW846 8270D BY SIM

	IS 1		IS 2		1S 3		1S 4		IS 5		1S 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	643242	4.37	2122605	5.42	1227224	6.97	2027252	8.39	1555213	11.16	2897506	12.67
Upper Limit [a]	1286484	4.87	4245210	5.92	2454448	7.47	4054504	8.89	3110426	11.66	5795012	13.17
Lower Limit [b]	321621	3.87	1061303	4.92	613612	6.47	1013626	7.89	777607	10.66	1448753	12.17
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
OP36544-MB	658154	4.37	2120702	5.42	1237986	6.97	2039828	8.39	1603422	11.16	2957924	12.67
OP36544-BS	674794	4.37	2149683	5.42	1224685	6.97	1980606	8.39	1572322	11.16	2839481	12.67
OP36544-MS	589626	4.37	1894185	5.42	1074109	6.97	1738052	8.39	1373358	11.17	2486511	12.67
OP36544-MSD	649315	4.37	2083331	5.42	1182237	6.97	1910059	8.39	1493347	11.17	2699537	12.67
MC27500-4	611024	4.37	1964870	5.42	1140665	6.97	1878190	8.39	1426038	11.16	2650414	12.67
MC27657-1	642337	4.37	2081479	5.42	1197246	6.97	1958901	8.39	1485373	11.16	2766318	12.67
MC27657-2	624276	4.37	2024486	5.42	1170617	6.97	1916400	8.39	1471408	11.16	2724579	12.67
MC27657-3	622542	4.37	2018547	5.42	1158564	6.97	1892901	8.39	1434147	11.16	2657021	12.67

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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1348-CC1262	Injection Date:	01/21/14
Lab File ID:	R36584.D	Injection Time:	07:36
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	426227	4.33	1614018	5.39	990145	6.93	1711816	8.22	1794233	10.86	1634469	12.60
Upper Limit [a]	852454	4.83	3228036	5.89	1980290	7.43	3423632	8.72	3588466	11.36	3268938	13.10
Lower Limit [b]	213114	3.83	807009	4.89	495073	6.43	855908	7.72	897117	10.36	817235	12.10
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
OP36543-MB	405601	4.33	1492068	5.39	926916	6.93	1592500	8.22	1637672	10.86	1515396	12.60
OP36543-BS	404099	4.33	1474745	5.39	894162	6.93	1546524	8.22	1603863	10.86	1444855	12.60
OP36543-MS	365339	4.33	1342424	5.39	811532	6.93	1380295	8.22	1400001	10.86	1265119	12.60
OP36543-MSD	400261	4.33	1476090	5.39	890847	6.93	1505739	8.22	1558749	10.86	1402673	12.60
MC27500-3	381724	4.33	1429757	5.39	866875	6.93	1516077	8.22	1490592	10.86	1415348	12.60
MC27657-1 [c]	410706	4.33	1515063	5.39	915209	6.92	1600509	8.22	1556821	10.86	1429335	12.60
MC27657-2	399684	4.33	1462842	5.39	890357	6.92	1548393	8.22	1502622	10.86	1396560	12.60
MC27657-3	395930	4.33	1455063	5.39	875477	6.93	1530856	8.22	1513722	10.86	1397313	12.60
MC27672-1	438655	4.33	1625925	5.39	980966	6.92	1677442	8.22	1703542	10.86	1604697	12.60
ZZZZZZ	395248	4.33	1475123	5.39	937519	6.93	1617726	8.22	1572554	10.86	1444723	12.60
OP36530-MB	381452	4.33	1406618	5.39	848798	6.92	1478788	8.22	1448019	10.86	1365745	12.60
OP36530-BS	362675	4.33	1343645	5.39	813886	6.93	1395365	8.22	1418293	10.86	1288632	12.60
OP36530-MS	378598	4.33	1393998	5.39	848259	6.93	1444467	8.22	1488983	10.86	1348906	12.60
OP36530-MSD	409243	4.33	1487896	5.39	902893	6.93	1552107	8.22	1557139	10.86	1369548	12.60
ZZZZZZ	370109	4.33	1348421	5.39	818654	6.92	1418932	8.22	1365175	10.86	1255254	12.60

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.
(c) Confirmation run.

Semivolatile Internal Standard Area Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	W17393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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	62557	4.48	241630	5.55	164010	7.10	289333	8.40	285398	11.11	259098	12.89
Upper Limit [a]	125114	4.98	483260	6.05	328020	7.60	578666	8.90	570796	11.61	518196	13.39
Lower Limit [b]	31279	3.98	120815	5.05	82005	6.60	144667	7.90	142699	10.61	129549	12.39
Lab Sample ID	IS I AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP36573-MSD	51600	4.48	190131	5.55	128488	7.10	220953	8.40	218789	11.11	199324	12.88
OP36620-MB	45862	4.48	171683	5.55	116403	7.09	211050	8.39	214282	11.10	200174	12.88
OP36620-BS	45909	4.48	170101	5.55	113627	7.10	193051	8.40	187125	11.11	171996	12.88
OP36620-MS	44598	4.48	166443	5.55	112276	7.10	193739	8.40	188534	11.11	171696	12.88
OP36620-MSD	43903	4.48	165388	5.55	112667	7.10	193301	8.40	191069	11.11	173530	12.88
MC27500-15	48317	4.48	181787	5.55	122934	7.09	213141	8.39	215160	11.10	200306	12.88
OP36563-MB	54118	4.48	200323	5.55	135366	7.10	232394	8.39	233497	11.10	220000	12.88
OP36563-BS	48812	4.48	182943	5.55	126214	7.10	217602	8.40	212988	11.11	195739	12.88
OP36563-MS	55916	4.48	209206	5.55	140461	7.10	244558	8.40	238395	11.11	221713	12.88
OP36563-MSD	56353	4.48	210312	5.55	143282	7.10	244228	8.40	239235	11.11	220906	12.88
MC27677-1	54709	4.48	199963	5.55	134961	7.09	231738	8.39	235112	11.10	219462	12.88
ZZZZZZ	54563	4.48	203471	5.55	137740	7.09	236842	8.39	238154	11.10	222161	12.88
ZZZZZZ	61301	4.48	230387	5.55	154264	7.10	269640	8.39	272751	11.10	253622	12.88
ZZZZZZ	57755	4.48	213449	5.55	146595	7.09	249372	8.39	250888	11.10	231448	12.88
ZZZZZZ	50853	4.48	189728	5.55	128577	7.09	220989	8.39	220023	11.10	204076	12.88
ZZZZZZ	55848	4.48	213248	5.55	142653	7.09	246402	8.39	245601	11.10	229553	12.88
ZZZZZZ	53240	4.48	196467	5.55	133356	7.09	228689	8.39	225563	11.10	213548	12.88
ZZZZZZ	52274	4.48	192442	5.55	130055	7.09	228547	8.39	228730	11.10	212344	12.88
ZZZZZZ	54439	4.48	200602	5.55	136943	7.09	237044	8.39	240182	11.10	221646	12.88
ZZZZZZ	58150	4.48	207725	5.55	137150	7.09	227587	8.39	222648	11.11	208058	12.88
ZZZZZZ	54910	4.48	207479	5.55	138901	7.09	240133	8.39	240756	11.10	219052	12.88
ZZZZZZ	58503	4.48	215219	5.55	143541	7.09	247033	8.39	246022	11.11	225669	12.88
MC27657-1	52722	4.48	197534	5.55	132861	7.09	225541	8.39	222046	11.10	206645	12.88
MC27657-3 [c]	58030	4.48	215283	5.55	144996	7.09	250030	8.39	254277	11.10	236176	12.88
ZZZZZZ	63690	4.48	235910	5.55	150881	7.09	252450	8.39	223048	11.10	191703	12.88
ZZZZZZ	61578	4.48	231467	5.55	152070	7.09	255098	8.39	236051	11.10	211469	12.88
ZZZZZZ	57035	4.49	178697	5.57	143478	7.13	188566	8.43	203038	11.12	197699	12.89
ZZZZZZ	61983	4.48	207544	5.56	137495	7.11	213808	8.41	223896	11.11	200991	12.88

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

7

Semivolatile Internal Standard Area Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	W17393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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.

Semivolatile Surrogate Recovery Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27657-1	R36590.D	2.0* [a]	5.0* [a]	12.0* [b]	71.0	57.0	79.0
MC27657-1	W17416.D	3.0* [a]	6.0* [a]	44.0	75.0	80.0	97.0
MC27657-2	R36591.D	29.0	20.0	42.0	53.0	39.0	79.0
MC27657-3	R36592.D	1.0* [a]	4.0* [a]	3.0* [a]	80.0	64.0	83.0
MC27657-3	W17417.D	2.0* [a]	5.0* [a]	7.0* [a]	74.0	77.0	93.0
OP36543-BS	R36586.D	45.0	30.0	77.0	83.0	68.0	75.0
OP36543-MB	R36585.D	45.0	30.0	70.0	87.0	69.0	82.0
OP36543-MS	R36587.D	42.0	29.0	75.0	80.0	69.0	79.0
OP36543-MSD	R36588.D	45.0	30.0	79.0	83.0	71.0	80.0
OP36620-BS	W17396.D	48.0	31.0	103.0	76.0	76.0	93.0
OP36620-MB	W17395.D	42.0	29.0	91.0	69.0	71.0	93.0
OP36620-MS	W17397.D	50.0	35.0	111.0* [b]	80.0	81.0	100.0
OP36620-MSD	W17398.D	50.0	34.0	112.0* [b]	81.0	81.0	97.0

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 re-extraction/reanalysis.
(b) Outside control limits due to possible matrix interference.

Semivolatile Surrogate Recovery Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27657-1	R36571.D	71.0	58.0	74.0
MC27657-2	R36572.D	54.0	40.0	74.0
MC27657-3	R36573.D	81.0	64.0	77.0
OP36544-BS	R36567.D	82.0	69.0	70.0
OP36544-MB	R36566.D	88.0	71.0	76.0
OP36544-MS	R36568.D	81.0	70.0	73.0
OP36544-MSD	R36569.D	84.0	73.0	75.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36542-MB	BB53818.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144

The QC reported here applies to the following samples: Method: SW846 8011

MC27657-1, MC27657-2, MC27657-3, MC27657-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	68%	36-173%
460-00-4	Bromofluorobenzene (S)	79%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36542-BS	BB53819.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144

The QC reported here applies to the following samples: Method: SW846 8011

MC27657-1, MC27657-2, MC27657-3, MC27657-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.043	61	60-140
106-93-4	1,2-Dibromoethane	0.071	0.055	77	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	68%	36-173%
460-00-4	Bromofluorobenzene (S)	74%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36542-MS	BB53820.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
OP36542-MSD	BB53821.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144
MC27500-1	BB53822.D	1	01/17/14	CZ	01/16/14	OP36542	GBB3144

The QC reported here applies to the following samples: Method: SW846 8011

MC27657-1, MC27657-2, MC27657-3, MC27657-5

CAS No.	Compound	MC27500-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.042	59* [a]	0.043	61* [a]	2	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.054	76	0.057	80	5	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-1	Limits
460-00-4	Bromofluorobenzene (S)	68%	71%	68%	36-173%
460-00-4	Bromofluorobenzene (S)	75%	75%	79%	36-173%

(a) Outside control limits due to possible matrix interference.

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27657-1	BB53823.D	74.0	84.0
MC27657-2	BB53824.D	61.0	71.0
MC27657-3	BB53825.D	67.0	77.0
MC27657-5	BB53826.D	63.0	73.0
OP36542-BS	BB53819.D	68.0	74.0
OP36542-MB	BB53818.D	68.0	79.0
OP36542-MS	BB53820.D	68.0	75.0
OP36542-MSD	BB53821.D	71.0	75.0

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: MC27657
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3144-CC3139	Injection Date:	01/17/14
Lab File ID:	BB53812.D	Injection Time:	00:17
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.91	4.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP36542-MB	BB53818.D	01/17/14	02:43	4.91	4.22
OP36542-BS	BB53819.D	01/17/14	03:07	4.91	4.22
OP36542-MS	BB53820.D	01/17/14	03:31	4.92	4.22
OP36542-MSD	BB53821.D	01/17/14	03:56	4.91	4.22
MC27500-1	BB53822.D	01/17/14	04:20	4.92	4.22
MC27657-1	BB53823.D	01/17/14	04:44	4.91	4.22
MC27657-2	BB53824.D	01/17/14	05:08	4.92	4.22
MC27657-3	BB53825.D	01/17/14	05:32	4.91	4.22
MC27657-5	BB53826.D	01/17/14	05:57	4.91	4.22
GBB3144-ECC313	BB53827.D	01/17/14	06:21	4.91	4.22

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC27677

Data Reviewer: Elizabeth Kunkel

Peer Reviewer: Steve Gragert

Date Reviewed: 2/10/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW10-ROX-011514	MW11-ROX-011514
MW12-ROX-011514	MW16-ROX-011514
MW24-ROX-011514	P54-ROX-011514
TB-ROX-011514-HCL	TB-ROX-011514-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 sample MW10-ROX-011514 was re-extracted outside of the extraction holding time criteria. Phenanthrene was detected in a method blank. VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC surrogate recoveries for 2-fluorophenol, phenol-d_5, and 2,4,6-tribromphenol were outside evaluation criteria. VOC MS/MSD recoveries and SVOC MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria in sample MW10-ROX-011514. Additionally, the initial and continuing calibration verifications for acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D) and 40%D, respectively. The initial calibration verification for aniline and bis(2-chloroisopropyl)ether exceeded 30%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.4ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, the laboratory issued a letter indicating that VOC samples, including trip blanks, were received headspace free, and that the cooler receipt form had been incorrectly marked as not applicable with regards to trip blanks and VOC headspace.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, sample MW10-ROX-011514 was re-extracted 7 days outside of the extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The initial extraction/analysis run was associated with low acid fraction surrogate recoveries. The re-extracted/re-analysis run was reported by the laboratory and helps confirms potential matrix interference. Holding time exceedances were not

greater than two times (2X) holding time criteria; data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
MW10-ROX-011514	SVOCs	Benzoic acid	**UJ**
MW10-ROX-011514	SVOCs	2-Chlorophenol	**UJ**
MW10-ROX-011514	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW10-ROX-011514	SVOCs	2,4-Dichlorophenol	**UJ**
MW10-ROX-011514	SVOCs	2,4-Dimethylphenol	**UJ**
MW10-ROX-011514	SVOCs	2,4-Dinitrophenol	**UJ**
MW10-ROX-011514	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW10-ROX-011514	SVOCs	2-Methylphenol	**UJ**
MW10-ROX-011514	SVOCs	3&4-Methylphenol	**UJ**
MW10-ROX-011514	SVOCs	2-Nitrophenol	**UJ**
MW10-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
MW10-ROX-011514	SVOCs	Pentachlorophenol	**UJ**
MW10-ROX-011514	SVOCs	Phenol	**UJ**
MW10-ROX-011514	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW10-ROX-011514	SVOCs	2,4,6-Trichlorophenol	**UJ**

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP36564-MB	PAHs	Phenanthrene	0.042 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. No qualification of data was required.

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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW11-ROX-011514	PAHs	Phenanthrene	-	**U**
MW12-ROX-011514	PAHs	Phenanthrene	-	**U**
MW16-ROX-011514	PAHs	Phenanthrene	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1026-BS	VOCs	Acrolein	**148**	70-130
MSV1026-BS	VOCs	2-Chloroethyl vinyl ether	**200**	70-130
OP36563-BS	SVOCs	4-Nitrophenol	**28**	30-130
OP36563-BS	SVOCs	bis(2-Chloroisopropyl) ether	**167**	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.

Sample ID	Parameter	Analyte	Qualification
MW10-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
MW11-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
MW12-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
MW16-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
MW24-ROX-011514	SVOCs	4-Nitrophenol	**UJ**
P54-ROX-011514	SVOCs	4-Nitrophenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW10-ROX-011514-Run#1	SVOCs	2-Fluorophenol	**10**	15-110
MW10-ROX-011514-Run#1	SVOCs	Phenol-d_5	**8**	15-110
MW12-ROX-011514-Run#1	SVOCs	Phenol-d_5	**11**	15-110
MW12-ROX-011514-Run#2	SVOCs	2-Fluorophenol	**13**	15-110
MW12-ROX-011514-Run#2	SVOCs	Phenol-d_5	**10**	15-110
MW12-ROX-011514-Run#2	SVOCs	2,4,6-Tribromophenol	**12**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Analytes associated with surrogate recovery outside evaluation criteria in MW10-ROX-011514-Run#1 were reported from Run#2.

Sample ID	Parameter	Analyte	Qualification
MW12-ROX-011514	SVOCs	Benzoic acid	**UJ**
MW12-ROX-011514	SVOCs	2-Chlorophenol	**UJ**
MW12-ROX-011514	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW12-ROX-011514	SVOCs	2,4-Dichlorophenol	**UJ**
MW12-ROX-011514	SVOCs	2,4-Dimethylphenol	**UJ**
MW12-ROX-011514	SVOCs	2,4-Dinitrophenol	**UJ**
MW12-ROX-011514	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW12-ROX-011514	SVOCs	2-Methylphenol	**UJ**
MW12-ROX-011514	SVOCs	3&4-Methylphenol	**UJ**
MW12-ROX-011514	SVOCs	2-Nitrophenol	**UJ**
MW12-ROX-011514	SVOCs	4-Nitrophenol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW12-ROX-011514	SVOCs	Pentachlorophenol	**UJ**
MW12-ROX-011514	SVOCs	Phenol	**UJ**
MW12-ROX-011514	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW12-ROX-011514	SVOCs	2,4,6-Trichlorophenol	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, sample MW10-ROX-011514 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
MW10-ROX-011514	VOCs	Acetone	**58**/**60**	2	70-130/30
MW10-ROX-011514	VOCs	Acrolein	**131**/**136**	3	70-130/30
MW10-ROX-011514	VOCs	2-Chloroethyl vinyl ether	**0**/**0**	NA	70-130/30
MW10-ROX-011514	VOCs	1,2,4-Trichlorobenzene	130/**132**	1	70-130/30
MW10-ROX-011514-Run#1	SVOCs	Benzoic acid	45/**0**	**200**	30-130/20
MW10-ROX-011514-Run#1	SVOCs	2,4-Dimethylphenol	60/37	**49**	30-130/20
MW10-ROX-011514-Run#1	SVOCs	2,4-Dinitrophenol	68/30	**81**	30-130/20
MW10-ROX-011514-Run#1	SVOCs	4-Nitrophenol	31/**27**	14	30-130/20
MW10-ROX-011514-Run#1	SVOCs	Phenol	**29**/**29**	5	30-130/20
MW10-ROX-011514-Run#1	SVOCs	bis(2-chloro-isopropyl) ether	**152**/**170**	8	40-140/20
MW10-ROX-011514-Run#1	SVOCs	Pyridine	47/70	**36**	40-140/20
MW10-ROX-011514-Run#2	SVOCs	Benzoic acid	**7**/63	**157**	30-130/20

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of 4-nitrophenol 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

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27677

Sampling Date: 01/15/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Reviewed on 2/7/2014

Total number of pages in report: **100**

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.

Reza Pand
Lab Director

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: MC27677

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27677-1	01/15/14	09:00	LRDM	01/16/14	AQ	Ground Water	MW10-ROX-011514
MC27677-1D	01/15/14	09:00	LRDM	01/16/14	AQ	Water Dup/MSD	MW10-ROX-011514
MC27677-1S	01/15/14	09:00	LRDM	01/16/14	AQ	Water Matrix Spike	MW10-ROX-011514
MC27677-2	01/15/14	10:05	LRDM	01/16/14	AQ	Ground Water	MW11-ROX-011514
MC27677-3	01/15/14	10:50	LRDM	01/16/14	AQ	Ground Water	MW12-ROX-011514
MC27677-4	01/15/14	13:55	LRDM	01/16/14	AQ	Ground Water	MW16-ROX-011514
MC27677-5	01/15/14	14:55	LRDM	01/16/14	AQ	Ground Water	MW24-ROX-011514
MC27677-6	01/15/14	15:40	LRDM	01/16/14	AQ	Ground Water	P54-ROX-011514
MC27677-7	01/15/14	00:00	LRDM	01/16/14	AQ	Trip Blank Water	TB-ROX-011514-HCL
MC27677-8	01/15/14	00:00	LRDM	01/16/14	AQ	Trip Blank Water	TB-ROX-011514-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27677
Site:	URSMOSTL:Roxana IQ14 GW/ 21562973.03001 900 South Central	**Report Date**	2/3/2014 3:22:02 PM

6 Sample(s), 2 Trip Blank(s) and 0 Field Blank(s) were collected on 01/15/2014 and were received at Accutest on 01/16/2014 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of MC27677. 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:** MSV1026

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27677-1MS, MC27677-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1026-BS for Acrolein are outside control limits. Blank Spike meets program technical requirements.
- MC27677-1MS for 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC27677-1MSD for 1,2,4-Trichlorobenzene, 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV1026-BS for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1026-CC1019 for acrolein, 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP36563

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27677-1MS, MC27677-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP36563-BS for 4-Nitrophenol are outside control limits. Blank Spike meets program technical requirements.
- OP36563-MS for Phenol are outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP36563-MSD for Phenol, Benzoic Acid are outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for OP36563-MSD for 2,4-Dimethylphenol, 2,4-Dinitrophenol, Benzoic Acid, Pyridine are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MC27677-3: Confirmation run for surrogate recoveries.
- OP36563-BS/MS/MSD for bis(2-Chloroisopropyl)ether: Outside control limits. Associated samples are non-detect for this compound.
- MC27677-1 for Phenol-d5, 2-Fluorophenol: Outside control limits. Sample re-extracted/reanalyzed.
- MC27677-3 for Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by reanalysis.
- OP36563-MSD for 4-Nitrophenol: Outside control limits. Blank Spike meets program technical requirements.
- Initial calibration verification MSW729-ICV729 for Aniline, bis(2-chloroisopropyl)ether exceed 30% Difference. These compounds are within criteria in continuing calibration check MSW765-CC729.

Matrix: AQ	Batch ID: OP36696

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The following samples were extracted outside of holding time for method SW846 8270D: MC27677-1. Sample re-extracted beyond recommended holding time.
- OP36696-MS1 for Benzoic Acid are outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for OP36696-MSD1 for 2,4-Dinitrophenol, Benzoic Acid are outside control limits. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP36564

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27677-1MS, MC27677-1MSD were used as the QC samples indicated.
- Sample(s) MC27677-1, MC27677-2, MC27677-3, MC27677-4 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: OP36562

- 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) MC27677-1MS, MC27677-1MSD 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 Aceutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC27677).

Summary of Hits

Job Number: MC27677
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/15/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27677-1	MW10-ROX-011514					
Acetone		17.4	10	2.8	ug/l	SW846 8260C
bis(2-Ethylhexyl)phthalate		0.54 J	2.1	0.52	ug/l	SW846 8270D
Benzo(g,h,i)perylene		0.096 J	0.11	0.029	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.074 J	0.11	0.034	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.072 J	0.11	0.033	ug/l	SW846 8270D BY SIM
Phenanthrene		0.037 JB	0.053	0.013	ug/l	SW846 8270D BY SIM
MC27677-2	MW11-ROX-011514					
Phenanthrene		0.026 JB	0.055	0.014	ug/l	SW846 8270D BY SIM
MC27677-3	MW12-ROX-011514					
Phenanthrene		0.022 JB	0.052	0.013	ug/l	SW846 8270D BY SIM
MC27677-4	MW16-ROX-011514					
bis(2-Ethylhexyl)phthalate		0.61 J	2.1	0.51	ug/l	SW846 8270D
Phenanthrene		0.031 JB	0.052	0.013	ug/l	SW846 8270D BY SIM
MC27677-5	MW24-ROX-011514					
No hits reported in this sample.						
MC27677-6	P54-ROX-011514					
bis(2-Ethylhexyl)phthalate		0.58 J	2.2	0.53	ug/l	SW846 8270D
MC27677-7	TB-ROX-011514-HCL					
Acetone		6.8 J	10	2.8	ug/l	SW846 8260C
MC27677-8	TB-ROX-011514-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW10-ROX-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	17.4	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dicbloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	99%		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:	MW10-ROX-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17404.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
Run #2 [a]	W17505.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	930 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND [b]	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND [b]	5.4	0.41	ug/l	UJ
59-50-7	4-Chloro-3-methyl phenol	ND [b]	11	0.53	ug/l	UJ
120-83-2	2,4-Dichlorophenol	ND [b]	11	0.35	ug/l	UJ
105-67-9	2,4-Dimethylphenol	ND [b]	11	1.2	ug/l	UJ
51-28-5	2,4-Dinitrophenol	ND [b]	22	2.7	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND [b]	11	1.3	ug/l	UJ
95-48-7	2-Methylphenol	ND [b]	11	1.4	ug/l	UJ
	3&4-Methylphenol	ND [b]	11	2.2	ug/l	UJ
88-75-5	2-Nitrophenol	ND [b]	11	0.54	ug/l	UJ
100-02-7	4-Nitrophenol	ND [b]	22	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND [b]	11	1.3	ug/l	UJ
108-95-2	Phenol	ND [b]	5.4	0.55	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND [b]	11	0.62	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND [b]	11	0.34	ug/l	UJ
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.54	2.1	0.52	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	10% c	18%	15-110%
4165-62-2	Phenol-d5	8% c	16%	15-110%
118-79-6	2,4,6-Tribromophenol	27%	54%	15-110%
4165-60-0	Nitrobenzene-d5	66%	75%	30-130%
321-60-8	2-Fluorobiphenyl	63%	73%	30-130%
1718-51-0	Terphenyl-d14	89%	86%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	
	Total TIC, Semi-Volatile		0	ug/l	

(a) Sample re-extracted beyond recommended holding time.
(b) Result is from Run# 2
(c) Outside control limits. Sample re-extracted/reanalyzed.

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW10-ROX-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36816.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
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	0.096	0.11	0.029	ug/l	J
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	0.074	0.11	0.034	ug/l	J
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	0.072	0.11	0.033	ug/l	J
90-12-0	1-Methylnaphthalene	ND	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.037	0.053	0.013	ug/l	JB
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	82%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	77%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW10-ROX-011514		
Lab Sample ID:	MC27677-1	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34040.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 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	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	74%		36-173%
460-00-4	Bromofluorobenzene (S)	81%		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-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27169.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroetbene	ND	1.0	0.54	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW11-ROX-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ng/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	MW11-ROX-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	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	

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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:	MW1I-ROX-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17406.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ng/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	ug/l	

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Report of Analysis

Client Sample ID:	MW11-ROX-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	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	19%		15-110%
4165-62-2	Phenol-d5	15%		15-110%
118-79-6	2,4,6-Tribromophenol	42%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	80%		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-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36817.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
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	ND	0.11	0.076	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	0.055	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	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	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	~~0.026~~ U	0.055	0.014	ug/l	JB U
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	80%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	69%		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-011514		
Lab Sample ID:	MC27677-2	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34041.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		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

Report of Analysis

Client Sample ID:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27170.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	96%		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	

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:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17407.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
Run #2 [a]	R36867.D	1	01/30/14	KR	01/17/14	OP36563	MSR1360

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2	960 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	UJ
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	UJ
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	UJ
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	UJ
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	UJ
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	UJ
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	UJ
	3&4-Methylphenol	ND	10	2.1	ug/l	UJ
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	UJ
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	UJ
108-95-2	Phenol	ND	5.2	0.53	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	10	0.60	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	UJ
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.89	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.60	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.96	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.68	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.67	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	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 iu associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.46	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.84	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	15%	13% [b]	15-110%
4165-62-2	Phenol-d5	11% [b]	10% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	18%	12% [b]	15-110%
4165-60-0	Nitrobenzene-d5	56%	67%	30-130%
321-60-8	2-Fluorobiphenyl	54%	52%	30-130%
1718-51-0	Terphenyl-d14	80%	73%	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.

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:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36818.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.072	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.052	ug/l	
120-12-7	Anthracene	ND	0.10	0.096	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	0.21	0.052	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.077	ug/l	
85-01-8	Phenanthrene	~~0.022~~ U	0.052	0.013	ug/l	JB U
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	53%		30-130%
1718-51-0	Terphenyl-d14	70%		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:	MW12-ROX-011514		
Lab Sample ID:	MC27677-3	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34042.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
Run #2							

	Initial Volume	Final Volume
Run #1	34.4 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	0.015	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.012	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	83%		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:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27171.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorohutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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Report of Analysis

Client Sample ID:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17408.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.89	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.60	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.96	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.68	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.67	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	ug/l	

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N = Indicates presumptive evideuce of a compound

Report of Analysis

Client Sample ID:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.61	2.1	0.51	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.46	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.84	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.54	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	45%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	98%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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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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:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36819.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.072	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.052	ug/l	
120-12-7	Anthracene	ND	0.10	0.096	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	0.21	0.052	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.077	ug/l	
85-01-8	Phenanthrene	~~0.031~~ U	0.052	0.013	ug/l	JB U
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	82%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	82%		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:	MW16-ROX-011514		
Lab Sample ID:	MC27677-4	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34043.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		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

Report of Analysis

Client Sample ID:	MW24-ROX-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27172.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW24-ROX-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ng/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	96%		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	

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-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17409.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	U J
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	32%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	63%		15-110%
4165-60-0	Nitrobenzene-d5	58%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	82%		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:	MW24-ROX-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36820.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	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	67%		30-130%
321-60-8	2-Fluorobiphenyl	54%		30-130%
1718-51-0	Terphenyl-d14	70%		30-130%

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:	MW24-ROX-011514		
Lab Sample ID:	MC27677-5	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34044.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	82%		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

Report of Analysis

Client Sample ID:	P54-ROX-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27173.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ng/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17410.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	P54-ROX-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.58	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	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	26%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	61%		15-110%
4165-60-0	Nitrobenzene-d5	38%		30-130%
321-60-8	2-Fluorobiphenyl	36%		30-130%
1718-51-0	Terphenyl-d14	71%		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:	P54-ROX-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36821.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
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	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	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	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	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.080	ug/l	
85-01-8	Phenanthrene	ND	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	48%		30-130%
321-60-8	2-Fluorobiphenyl	35%		30-130%
1718-51-0	Terphenyl-d14	60%		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:	P54-ROX-011514		
Lab Sample ID:	MC27677-6	Date Sampled:	01/15/14
Matrix:	AQ - Ground Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34045.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	82%		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:	TB-ROX-011514-HCL		
Lab Sample ID:	MC27677-7	Date Sampled:	01/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27156.D	1	01/17/14	AMY	n/a	n/a	MSV1026
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	6.8	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011514-HCL		
Lab Sample ID:	MC27677-7	Date Sampled:	01/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011514-HCL		
Lab Sample ID:	MC27677-7	Date Sampled:	01/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/16/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011514-ST		
Lab Sample ID:	MC27677-8	Date Sampled:	01/15/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/16/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34047.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	77%		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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ VENCO ( )
☐ CALSCIENCE ( )
☑ OTHER (Accutest Labs, 495 Technology Ctr 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 SOUTH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 5 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # ...

DATE 1/15/14

PAGE 1 of 1

COMPANY/COMPANY: URS CORPORATION

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST LOUIS, MO 63110

PROJECT CONTACT (Name, + PO Access): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100 FAX: 314-429-0462

BILL TO CONTACT E-MAIL: bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA

State: IL

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562973.03001

SAMPLER NAME(S): L. Rathrow, D. Mattingly

LAB USE ONLY: MC27677

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ UL - RAQCS 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
☐ EDD NOT NEEDED
☑ VECTOR 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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL								PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW10-ROX-011514	1/15/14	0900	Water	2			2	2	6	X	X	X	X					MC27677		-1	0	
-2	MW10-ROX-011514-MS		0900								X	X	X	X							-1 MSD		
MSD	MW10-ROX-011514-MSD		0900								X	X	X	X							-1		3A4,
-2	MW11-ROX-011514		1005								X	X	X	X							-2		
-3	MW12-ROX-011514		1050								X	X	X	X							-3		19B
-4	MW16-ROX-011514		1355								X	X	X	X							-4		
-5	MW24-ROX-011514		1455								X	X	X	X							-5		
-6	P54-ROX-011514		1540								X	X	X	X							-6		
-7	TB-ROX-011514-HCL		00:00		2					2	X										-7		
-8	TB-ROX-011514-ST		00:00						2	2		X									-8		

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/15/14	1700
Ex	[signature]	1-16-14	915

1,3°C

5.1

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MC27677: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27677 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/16/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: URS **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 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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MC27677: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27677

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27677-1 Collected: 15-JAN-14 09:00 By: LRDM Received: 16-JAN-14 By: NT						
MW10-ROX-011514						
MC27677-1	SW846 8260C	17-JAN-14 13:59	AMY			V8260SL+
MC27677-1	SW846 8011	17-JAN-14 16:04	NK	17-JAN-14	MR	V8011SL
MC27677-1	SW846 8270D	28-JAN-14 12:47	KR	17-JAN-14	MEW	AB8270SL+
MC27677-1	SW846 8270D BY SIM	29-JAN-14 12:41	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-1	SW846 8270D	31-JAN-14 14:27	KR	29-JAN-14	MEW	AB8270SL+
MC27677-2 Collected: 15-JAN-14 10:05 By: LRDM Received: 16-JAN-14 By: NT						
MW11-ROX-011514						
MC27677-2	SW846 8011	17-JAN-14 16:27	NK	17-JAN-14	MR	V8011SL
MC27677-2	SW846 8260C	17-JAN-14 17:57	AMY			V8260SL+
MC27677-2	SW846 8270D	28-JAN-14 13:35	KR	17-JAN-14	MEW	AB8270SL+
MC27677-2	SW846 8270D BY SIM	29-JAN-14 13:03	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-3 Collected: 15-JAN-14 10:50 By: LRDM Received: 16-JAN-14 By: NT						
MW12-ROX-011514						
MC27677-3	SW846 8011	17-JAN-14 16:51	NK	17-JAN-14	MR	V8011SL
MC27677-3	SW846 8260C	17-JAN-14 18:23	AMY			V8260SL+
MC27677-3	SW846 8270D	28-JAN-14 13:59	KR	17-JAN-14	MEW	AB8270SL+
MC27677-3	SW846 8270D BY SIM	29-JAN-14 13:27	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-3	SW846 8270D	30-JAN-14 11:45	KR	17-JAN-14	MEW	AB8270SL+
MC27677-4 Collected: 15-JAN-14 13:55 By: LRDM Received: 16-JAN-14 By: NT						
MW16-ROX-011514						
MC27677-4	SW846 8011	17-JAN-14 17:14	NK	17-JAN-14	MR	V8011SL
MC27677-4	SW846 8260C	17-JAN-14 18:50	AMY			V8260SL+
MC27677-4	SW846 8270D	28-JAN-14 14:22	KR	17-JAN-14	MEW	AB8270SL+
MC27677-4	SW846 8270D BY SIM	29-JAN-14 13:49	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-5 Collected: 15-JAN-14 14:55 By: LRDM Received: 16-JAN-14 By: NT						
MW24-ROX-011514						
MC27677-5	SW846 8011	17-JAN-14 17:37	NK	17-JAN-14	MR	V8011SL
MC27677-5	SW846 8260C	17-JAN-14 19:16	AMY			V8260SL+
MC27677-5	SW846 8270D	28-JAN-14 14:46	KR	17-JAN-14	MEW	AB8270SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27677

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27677-5	SW846 8270D BY SIM	29-JAN-14 14:12	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-6 Collected: 15-JAN-14 15:40 By: LRDM Received: 16-JAN-14 By: NT P54-ROX-011514						
MC27677-6	SW846 8011	17-JAN-14 18:00	NK	17-JAN-14	MR	V8011SL
MC27677-6	SW846 8260C	17-JAN-14 19:43	AMY			V8260SL+
MC27677-6	SW846 8270D	28-JAN-14 15:10	KR	17-JAN-14	MEW	AB8270SL+
MC27677-6	SW846 8270D BY SIM	29-JAN-14 14:34	KR	17-JAN-14	MEW	B8270SIMSL
MC27677-7 Collected: 15-JAN-14 00:00 By: LRDM Received: 16-JAN-14 By: NT TB-ROX-011514-HCL						
MC27677-7	SW846 8260C	17-JAN-14 12:14	AMY			V8260SL+
MC27677-8 Collected: 15-JAN-14 00:00 By: LRDM Received: 16-JAN-14 By: NT TB-ROX-011514-ST						
MC27677-8	SW846 8011	17-JAN-14 18:46	NK	17-JAN-14	MR	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27677-1.2	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-1.3	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-1.3	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-1.3	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-1.3	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-1.7	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27677-1.8	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-1.9	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-1.11	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-1.11	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-1.11	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-1.11	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-1.12	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-1.12	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-1.12	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-1.12	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-1.13	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-1.13	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-1.13	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-1.13	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-1.16	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-1.17	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-1.18	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-2.2	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-2.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-2.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-2.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-2.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Retnrn to Storage
MC27677-2.6	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-3.1	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/16/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27677-3.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-3.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load ou Instrument
MC27677-3.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-3.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-3.5	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-4.2	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-4.3	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-4.3	Amy Miu Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-4.3	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-4.3	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-4.6	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-5.1	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-5.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-5.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-5.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-5.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-5.5	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-6.1	Walk In Ref #22	Michael Rolo	01/17/14 09:57	Retrieve from Storage
MC27677-6.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-6.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-6.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-6.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Retnrn to Storage
MC27677-6.5	VOC Ref #3	Michael Rolo	01/17/14 06:55	Retrieve from Storage
MC27677-7.4	VOC Ref #3	Amy Min Yang	01/17/14 11:10	Retrieve from Storage
MC27677-7.4	Amy Min Yang	GCMSV	01/17/14 11:10	Load on Instrument
MC27677-7.4	GCMSV	Amy Min Yang	01/20/14 17:16	Unload from Instrument
MC27677-7.4	Amy Min Yang	VOC Ref #3	01/20/14 17:16	Return to Storage
MC27677-8.3	VOC Ref #3	Michael Rolo	01/17/14 06:55	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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylhenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-MB	V27155.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	70-130%
2037-26-5	Toluene-D8	98%	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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.4	105	70-130
107-02-8	Acrolein	50	74.0	148* a	70-130
107-13-1	Acrylonitrile	100	93.9	94	70-130
71-43-2	Benzene	50	53.7	107	70-130
108-86-1	Bromobenzene	50	54.7	109	70-130
74-97-5	Bromochloromethane	50	52.5	105	70-130
75-27-4	Bromodichloromethane	50	54.2	108	70-130
75-25-2	Bromoform	50	44.0	88	70-130
74-83-9	Bromomethane	50	44.1	88	70-130
78-93-3	2-Butanone (MEK)	50	49.1	98	70-130
104-51-8	n-Butylbenzene	50	58.3	117	70-130
135-98-8	sec-Butylbenzene	50	59.5	119	70-130
98-06-6	tert-Butylbenzene	50	57.4	115	70-130
75-15-0	Carbon disulfide	50	50.1	100	70-130
56-23-5	Carbon tetrachloride	50	55.5	111	70-130
108-90-7	Chlorobenzene	50	48.0	96	70-130
75-00-3	Chloroethane	50	53.3	107	70-130
110-75-8	2-Chloroethyl vinyl ether	50	100	200* b	70-130
67-66-3	Chloroform	50	49.3	99	70-130
74-87-3	Chloromethane	50	45.8	92	70-130
95-49-8	o-Chlorotoluene	50	53.8	108	70-130
106-43-4	p-Chlorotoluene	50	54.5	109	70-130
124-48-1	Dibromochloromethane	50	56.5	113	70-130
95-50-1	1,2-Dichlorobenzene	50	50.2	100	70-130
541-73-1	1,3-Dichlorobenzene	50	51.6	103	70-130
106-46-7	1,4-Dichlorobenzene	50	51.5	103	70-130
75-71-8	Dichlorodifluoromethane	50	46.5	93	70-130
75-34-3	1,1-Dichloroethane	50	52.0	104	70-130
107-06-2	1,2-Dichloroethane	50	48.8	98	70-130
75-35-4	1,1-Dichloroethene	50	55.6	111	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.4	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.0	106	70-130
78-87-5	1,2-Dichloropropane	50	51.2	102	70-130
142-28-9	1,3-Dichloropropane	50	51.4	103	70-130
594-20-7	2,2-Dichloropropane	50	60.7	121	70-130
563-58-6	1,1-Dicbloropropene	50	53.2	106	70-130

* = Ontside of Control Limits.

Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.9	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.7	99	70-130
123-91-1	1,4-Dioxane	250	239	96	70-130
97-63-2	Ethyl methacrylate	50	46.1	92	77-137
100-41-4	Ethylbenzene	50	54.6	109	70-130
87-68-3	Hexachlorobutadiene	50	59.8	120	70-130
591-78-6	2-Hexanone	50	47.7	95	70-130
98-82-8	Isopropylbenzene	50	60.3	121	70-130
99-87-6	p-Isopropyltoluene	50	58.6	117	70-130
1634-04-4	Methyl Tert Butyl Ether	50	54.8	110	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.0	100	70-130
74-95-3	Methylene bromide	50	50.2	100	70-130
75-09-2	Methylene chloride	50	49.7	99	70-130
91-20-3	Naphthalene	50	52.8	106	70-130
103-65-1	n-Propylbenzene	50	57.8	116	70-130
100-42-5	Styrene	50	51.1	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	53.0	106	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	70-130
127-18-4	Tetrachloroethene	50	55.3	111	70-130
108-88-3	Toluene	50	56.1	112	70-130
87-61-6	1,2,3-Trichlorobenzene	50	60.0	120	70-130
120-82-1	1,2,4-Trichlorobenzene	50	62.0	124	70-130
71-55-6	1,1,1-Trichloroethane	50	55.3	111	70-130
79-00-5	1,1,2-Trichloroethane	50	51.1	102	70-130
79-01-6	Trichloroethene	50	54.5	109	70-130
75-69-4	Trichlorofluoromethane	50	51.2	102	70-130
96-18-4	1,2,3-Trichloropropane	50	53.4	107	70-130
95-63-6	1,2,4-Trimethylbenzene	50	58.5	117	70-130
108-67-8	1,3,5-Trimethylbenzene	50	59.5	119	70-130
108-05-4	Vinyl Acetate	50	50.6	101	70-130
75-01-4	Vinyl chloride	50	41.8	84	70-130
	m,p-Xylene	100	92.9	93	70-130
95-47-6	o-Xylene	50	46.6	93	70-130
1330-20-7	Xylene (total)	150	140	93	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1026-BS	V27151.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	99%	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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	17.4		50	46.6	58* a	47.4	60* a	2	70-130/30
107-02-8	Acrolein	ND		50	65.7	131* a	67.8	136* a	3	70-130/30
107-13-1	Acrylonitrile	ND		100	108	108	107	107	1	70-130/30
71-43-2	Benzene	ND		50	56.9	114	56.0	112	2	70-130/30
108-86-1	Bromobenzene	ND		50	57.9	116	57.3	115	1	70-130/30
74-97-5	Bromochloromethane	ND		50	55.8	112	55.0	110	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	56.7	113	55.0	110	3	70-130/30
75-25-2	Bromoform	ND		50	44.9	90	45.6	91	2	70-130/30
74-83-9	Bromomethane	ND		50	47.2	94	45.9	92	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	38.0	76	37.9	76	0	70-130/30
104-51-8	n-Butylbenzene	ND		50	61.8	124	60.7	121	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	63.1	126	62.1	124	2	70-130/30
98-06-6	tert-Butylbenzene	ND		50	61.0	122	59.2	118	3	70-130/30
75-15-0	Carbon disulfide	ND		50	54.5	109	52.9	106	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	58.4	117	56.9	114	3	70-130/30
108-90-7	Chlorobenzene	ND		50	50.2	100	49.8	100	1	70-130/30
75-00-3	Chloroethane	ND		50	57.8	116	55.2	110	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		50	53.0	106	51.5	103	3	70-130/30
74-87-3	Chloromethane	ND		50	51.0	102	49.2	98	4	70-130/30
95-49-8	o-Chlorotoluene	ND		50	56.6	113	55.3	111	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	57.8	116	56.1	112	3	70-130/30
124-48-1	Dibromochloromethane	ND		50	58.5	117	58.7	117	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	52.9	106	52.2	104	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	54.5	109	53.6	107	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	54.0	108	53.3	107	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	60.0	120	57.6	115	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	56.5	113	54.9	110	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	51.8	104	51.0	102	2	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	61.7	123	59.4	119	4	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	57.8	116	56.8	114	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	57.4	115	56.2	112	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.6	109	53.4	107	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	53.7	107	53.8	108	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	63.8	128	62.4	125	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	57.8	116	55.5	111	4	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	51.0	102	50.3	101	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.3	105	52.0	104	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	192	77	231	92	18	70-130/30
97-63-2	Ethyl methacrylate	ND		50	51.4	103	50.8	102	1	72-139/30
100-41-4	Ethylbenzene	ND		50	57.3	115	56.2	112	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	61.2	122	60.9	122	0	70-130/30
591-78-6	2-Hexanone	ND		50	41.2	82	41.6	83	1	70-130/30
98-82-8	Isopropylbenzene	ND		50	64.4	129	63.0	126	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	61.1	122	60.0	120	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	58.9	118	60.3	121	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	56.8	114	57.0	114	0	70-130/30
74-95-3	Methylene bromide	ND		50	52.9	106	52.0	104	2	70-130/30
75-09-2	Methylene chloride	ND		50	54.4	109	53.2	106	2	70-130/30
91-20-3	Naphthalene	ND		50	57.0	114	61.1	122	7	70-130/30
103-65-1	n-Propylbenzene	ND		50	61.0	122	59.8	120	2	70-130/30
100-42-5	Styrene	ND		50	53.1	106	51.9	104	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.0	112	55.0	110	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	54.6	109	55.0	110	1	70-130/30
127-18-4	Tetrachloroetbene	ND		50	58.2	116	57.6	115	1	70-130/30
108-88-3	Toluene	ND		50	59.6	119	58.1	116	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	59.4	119	64.5	129	8	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	65.2	130	66.0	132* [a]	1	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	58.6	117	56.7	113	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	53.8	108	53.3	107	1	70-130/30
79-01-6	Trichloroethene	ND		50	57.5	115	56.0	112	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	54.9	110	52.0	104	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	57.8	116	57.0	114	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	62.2	124	60.3	121	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	63.3	127	62.2	124	2	70-130/30
108-05-4	Vinyl Acetate	ND		50	55.2	110	53.7	107	3	70-130/30
75-01-4	Vinyl chloride	ND		50	47.0	94	45.2	90	4	70-130/30
	m,p-Xylene	ND		100	96.2	96	95.8	96	0	70-130/30
95-47-6	o-Xylene	ND		50	48.4	97	48.3	97	0	70-130/30
1330-20-7	Xylene (total)	ND		150	145	97	144	96	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27677-1MS	V27166.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1MSD	V27167.D	1	01/17/14	AMY	n/a	n/a	MSV1026
MC27677-1	V27160.D	1	01/17/14	AMY	n/a	n/a	MSV1026

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

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-7

CAS No.	Surrogate Recoveries	MS	MSD	MC27677-1	Limits
1868-53-7	Dibromofluoromethane	95%	94%	93%	70-130%
2037-26-5	Toluene-D8	98%	98%	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	98%	108%	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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1026-CC1019	Injection Date:	01/17/14
Lab File ID:	V27151.D	Injection Time:	10:03
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	696176	6.57	881560	7.75	470974	11.08	518286	13.29	204664	3.52
Upper Limit [a]	1392352	7.07	1763120	8.25	941948	11.58	1036572	13.79	409328	4.02
Lower Limit [b]	348088	6.07	440780	7.25	235487	10.58	259143	12.79	102332	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
MSV1026-BS	696176	6.57	881560	7.75	470974	11.08	518286	13.29	204664	3.52
MSV1026-MB	552672	6.57	735971	7.75	401640	11.08	383324	13.29	175692	3.53
MC27677-7	560200	6.58	748104	7.75	405124	11.08	391049	13.29	173228	3.53
ZZZZZZ	553382	6.57	738312	7.75	395462	11.08	385056	13.29	187209	3.52
ZZZZZZ	522672	6.57	709848	7.75	384437	11.08	367842	13.29	175812	3.52
ZZZZZZ	532381	6.57	712527	7.75	384060	11.08	369070	13.29	172316	3.52
MC27677-1	568546	6.57	705055	7.75	386223	11.08	362525	13.29	186912	3.52
ZZZZZZ	520549	6.57	683231	7.75	367603	11.08	349643	13.29	167449	3.52
ZZZZZZ	505653	6.57	663654	7.75	366741	11.08	346479	13.29	165839	3.52
ZZZZZZ	471314	6.58	637653	7.75	350063	11.08	335874	13.29	158406	3.53
ZZZZZZ	570475	6.58	715540	7.75	396882	11.08	406683	13.29	241219	3.53
ZZZZZZ	591947	6.57	764004	7.75	420862	11.08	420783	13.29	236760	3.53
MC27677-1MS	653801	6.57	839341	7.75	450982	11.08	482952	13.29	201341	3.53
MC27677-1MSD	675317	6.58	863165	7.75	458865	11.08	496178	13.29	215067	3.53
ZZZZZZ	640502	6.57	830451	7.75	438575	11.08	445890	13.29	192210	3.52
MC27677-2	618725	6.58	823034	7.75	429141	11.08	420869	13.29	210337	3.53
MC27677-3	584500	6.57	782739	7.75	410706	11.08	399493	13.29	196199	3.52
MC27677-4	576053	6.58	767570	7.75	410750	11.08	402216	13.29	191035	3.53
MC27677-5	564829	6.58	757880	7.75	404152	11.08	387626	13.29	188885	3.52
MC27677-6	547759	6.58	734916	7.75	392286	11.08	383259	13.29	184394	3.53
ZZZZZZ	616823	6.57	780852	7.75	443429	11.08	436536	13.29	178953	3.52
ZZZZZZ	579362	6.57	764293	7.75	419167	11.08	419593	13.29	190448	3.52
ZZZZZZ	605802	6.57	810174	7.75	435376	11.08	422406	13.29	200980	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.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Method: SW846 8260C Matrix: AQ

Samples and QC sbown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC27677-1	V27160.D	93.0	99.0	108.0
MC27677-2	V27169.D	96.0	97.0	102.0
MC27677-3	V27170.D	99.0	96.0	104.0
MC27677-4	V27171.D	100.0	97.0	103.0
MC27677-5	V27172.D	101.0	96.0	104.0
MC27677-6	V27173.D	102.0	97.0	103.0
MC27677-7	V27156.D	100.0	97.0	103.0
MC27677-1MS	V27166.D	95.0	98.0	99.0
MC27677-1MSD	V27167.D	94.0	98.0	98.0
MSV1026-BS	V27151.D	94.0	98.0	99.0
MSV1026-MB	V27155.D	100.0	98.0	104.0

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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-MB	W17400.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-MB	W17400.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

7.1.1

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CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	50%	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	72%	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	

Method Blank Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	33%	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	76%	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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36564-MB	R36812.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.042	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	89%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	79%	30-130%

Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-BS	W17401.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.2	42	30-130
95-57-8	2-Chlorophenol	50	38.2	76	30-130
59-50-7	4-Chloro-3-methyl phenol	50	35.7	71	30-130
120-83-2	2,4-Dichlorophenol	50	35.9	72	30-130
105-67-9	2,4-Dimethylphenol	50	33.4	67	30-130
51-28-5	2,4-Dinitrophenol	50	30.9	62	30-130
534-52-1	4,6-Dinitro-o-cresol	50	42.4	85	30-130
95-48-7	2-Methylphenol	50	33.2	66	30-130
	3&4-Methylphenol	100	60.0	60	30-130
88-75-5	2-Nitrophenol	50	38.7	77	30-130
100-02-7	4-Nitrophenol	50	13.9	28* a	30-130
87-86-5	Pentachlorophenol	50	37.6	75	30-130
108-95-2	Phenol	50	16.9	34	30-130
95-95-4	2,4,5-Trichlorophenol	50	34.4	69	30-130
88-06-2	2,4,6-Trichlorophenol	50	35.2	70	30-130
62-53-3	Aniline	50	25.5	51	40-140
101-55-3	4-Bromophenyl phenyl ether	50	46.2	92	40-140
85-68-7	Butyl benzyl phthalate	50	38.7	77	40-140
100-51-6	Benzyl Alcohol	50	33.0	66	40-140
91-58-7	2-Chloronaphthalene	50	34.0	68	40-140
106-47-8	4-Chloroaniline	50	34.0	68	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	28.0	56	40-140
111-44-4	bis(2-Chloroethyl)ether	50	40.3	81	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	83.6	167* b	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	38.9	78	40-140
122-66-7	1,2-Diphenylhydrazine	50	37.4	75	40-140
121-14-2	2,4-Dinitrotoluene	50	37.6	75	40-140
606-20-2	2,6-Dinitrotoluene	50	36.3	73	40-140
91-94-1	3,3'-Dichlorobenzidine	50	37.5	75	40-140
132-64-9	Dibenzofuran	50	35.2	70	40-140
84-74-2	Di-n-butyl phthalate	50	35.6	71	40-140
117-84-0	Di-n-octyl phthalate	50	38.0	76	40-140
84-66-2	Diethyl phthalate	50	33.5	67	40-140
131-11-3	Dimethyl phthalate	50	28.3	57	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	41.5	83	40-140
118-74-1	Hexachlorobenzene	50	47.6	95	40-140

* = Outside of Control Limits.

7.2.1

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Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-BS	W17401.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	53.0	106	40-140
67-72-1	Hexachloroethane	50	33.3	67	40-140
78-59-1	Isophorone	50	35.8	72	40-140
88-74-4	2-Nitroaniline	50	36.4	73	40-140
99-09-2	3-Nitroaniline	50	34.5	69	40-140
100-01-6	4-Nitroaniline	50	34.3	69	40-140
98-95-3	Nitrobenzene	50	36.9	74	40-140
62-75-9	n-Nitrosodimethylamine	50	31.0	62	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	36.2	72	40-140
86-30-6	N-Nitrosodiphenylamine	50	35.3	71	40-140
110-86-1	Pyridine	50	26.0	52	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	49%	15-110%
4165-62-2	Phenol-d5	32%	15-110%
118-79-6	2,4,6-Tribromophenol	100%	15-110%
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	87%	30-130%

(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.

7.2.1

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Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1

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	44.8	90	30-130
59-50-7	4-Chloro-3-methyl phenol	50	48.5	97	30-130
120-83-2	2,4-Dichlorophenol	50	51.3	103	30-130
105-67-9	2,4-Dimethylphenol	50	41.8	84	30-130
51-28-5	2,4-Dinitrophenol	50	50.0	100	30-130
534-52-1	4,6-Dinitro-o-cresol	50	54.1	108	30-130
95-48-7	2-Methylphenol	50	41.6	83	30-130
	3&4-Methylphenol	100	79.2	79	30-130
88-75-5	2-Nitrophenol	50	51.1	102	30-130
100-02-7	4-Nitrophenol	50	22.4	45	30-130
87-86-5	Pentachlorophenol	50	44.1	88	30-130
108-95-2	Phenol	50	21.4	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.8	102	30-130
88-06-2	2,4,6-Trichlorophenol	50	49.1	98	30-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	37%	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	82%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36564-BS	R36813.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.9	80	40-140
208-96-8	Acenaphthylene	50	31.1	62	40-140
120-12-7	Anthracene	50	41.5	83	40-140
56-55-3	Benzo(a)anthracene	50	52.2	104	40-140
50-32-8	Benzo(a)pyrene	50	38.4	77	40-140
205-99-2	Benzo(b)fluoranthene	50	44.3	89	40-140
191-24-2	Benzo(g,h,i)perylene	50	44.9	90	40-140
207-08-9	Benzo(k)fluoranthene	50	45.1	90	40-140
218-01-9	Chrysene	50	46.4	93	40-140
53-70-3	Dibenzo(a,h)anthracene	50	46.4	93	40-140
206-44-0	Fluoranthene	50	47.1	94	40-140
86-73-7	Fluorene	50	41.7	83	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.9	92	40-140
90-12-0	1-Methylnaphthalene	50	36.5	73	40-140
91-57-6	2-Methylnaphthalene	50	35.5	71	40-140
85-01-8	Phenanthrene	50	43.2	86	40-140
129-00-0	Pyrene	50	47.4	95	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	81%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	73%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-MS	W17402.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
OP36563-MSD	W17403.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
MC27677-1	W17404.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

7.3.1

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CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		53.8	24.3	45	ND	0* a	200* b	30-130/20
95-57-8	2-Chlorophenol	ND		53.8	32.0	60	33.3	64	4	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		53.8	31.6	59	31.8	61	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		53.8	29.9	56	32.7	63	9	30-130/20
105-67-9	2,4-Dimethylphenol	ND		53.8	32.1	60	19.4	37	49* b	30-130/20
51-28-5	2,4-Dinitrophenol	ND		53.8	36.7	68	15.5	30	81* b	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		53.8	46.5	86	47.9	92	3	30-130/20
95-48-7	2-Methylphenol	ND		53.8	30.0	56	28.7	55	4	30-130/20
	3&4-Methylphenol	ND		108	51.3	48	49.6	48	3	30-130/20
88-75-5	2-Nitrophenol	ND		53.8	37.2	69	40.8	78	9	30-130/20
100-02-7	4-Nitrophenol	ND		53.8	16.4	31	14.3	27* c	14	30-130/20
87-86-5	Pentachlorophenol	ND		53.8	38.5	72	36.5	70	5	30-130/20
108-95-2	Phenol	ND		53.8	15.6	29* a	14.9	29* a	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		53.8	33.1	62	33.2	64	0	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		53.8	31.7	59	32.8	63	3	30-130/20
62-53-3	Aniline	ND		53.8	23.9	44	26.7	51	11	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		53.8	49.1	91	50.1	96	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		53.8	41.6	77	42.5	82	2	40-140/20
100-51-6	Benzyl Alcohol	ND		53.8	32.2	60	35.1	67	9	40-140/20
91-58-7	2-Chloronaphthalene	ND		53.8	34.4	64	35.3	68	3	40-140/20
106-47-8	4-Chloroaniline	ND		53.8	32.3	60	34.4	66	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		53.8	27.9	52	30.3	58	8	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		53.8	39.2	73	42.8	82	9	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		53.8	81.5	152* d	88.4	170* d	8	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		53.8	41.3	77	41.7	80	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		53.8	39.0	73	40.5	78	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		53.8	40.5	75	39.8	76	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		53.8	38.5	72	39.5	76	3	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		53.8	37.6	70	39.8	76	6	40-140/20
132-64-9	Dibenzofuran	ND		53.8	37.7	70	38.2	73	1	40-140/20
84-74-2	Di-n-butyl phthalate	ND		53.8	37.7	70	39.0	75	3	40-140/20
117-84-0	Di-n-octyl phthalate	ND		53.8	39.9	74	40.7	78	2	40-140/20
84-66-2	Diethyl phthalate	ND		53.8	37.5	70	38.4	74	2	40-140/20
131-11-3	Dimethyl phthalate	ND		53.8	38.3	71	38.4	74	0	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	0.54	J	53.8	44.1	81	44.0	83	0	40-140/20
118-74-1	Hexachlorobenzene	ND		53.8	50.6	94	51.5	99	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36563-MS	W17402.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
OP36563-MSD	W17403.D	1	01/28/14	KR	01/17/14	OP36563	MSW765
MC27677-1	W17404.D	1	01/28/14	KR	01/17/14	OP36563	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

7.3.1

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CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		53.8	50.8	94	51.1	98	1	40-140/20
67-72-1	Hexachloroethane	ND		53.8	27.2	51	27.8	53	2	40-140/20
78-59-1	Isophorone	ND		53.8	35.8	67	38.4	74	7	40-140/20
88-74-4	2-Nitroaniline	ND		53.8	38.5	72	39.5	76	3	40-140/20
99-09-2	3-Nitroaniline	ND		53.8	35.9	67	37.0	71	3	40-140/20
100-01-6	4-Nitroaniline	ND		53.8	36.7	68	36.5	70	1	40-140/20
98-95-3	Nitrobenzene	ND		53.8	35.2	65	39.0	75	10	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		53.8	31.6	59	33.0	63	4	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		53.8	35.3	66	38.6	74	9	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		53.8	38.2	71	39.7	76	4	40-140/20
110-86-1	Pyridine	ND		53.8	25.1	47	36.2	70	36* b	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27677-1	Limits
367-12-4	2-Fluorophenol	35%	40%	10%* e	15-110%
4165-62-2	Phenol-d5	28%	27%	8%* e	15-110%
118-79-6	2,4,6-Tribromophenol	86%	88%	27%	15-110%
4165-60-0	Nitrobenzene-d5	63%	70%	66%	30-130%
321-60-8	2-Fluorobiphenyl	61%	68%	63%	30-130%
1718-51-0	Terphenyl-d14	87%	88%	89%	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 non-homogeneity.
(c) Outside control limits. Blank Spike meets program technical requirements.
(d) Outside control limits. Associated samples are non-detect for this compound.
(e) Outside control limits. Sample re-extracted/reanalyzed.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27677-1

7.3.2

7

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	4.1	7* a	33.7	63	157* b	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	46.0	84	45.3	85	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	50.8	92	53.5	101	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	49.8	91	52.1	98	5	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	49.4	90	51.7	97	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	44.0	80	55.9	105	24* b	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	53.5	97	60.4	114	12	30-130/20
95-48-7	2-Methylphenol	ND		54.9	45.5	83	47.7	90	5	30-130/20
	3&4-Methylphenol	ND		110	90.6	82	96.6	91	6	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	49.1	89	50.9	96	4	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	27.3	50	32.7	61	18	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	47.4	86	53.8	101	13	30-130/20
108-95-2	Phenol	ND		54.9	26.3	48	29.9	56	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.8	87	55.0	103	14	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	45.1	82	54.1	102	18	30-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
367-12-4	2-Fluorophenol	51%	50%	47%	15-110%
4165-62-2	Phenol-d5	41%	49%	36%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	95%	78%	15-110%
4165-60-0	Nitrobenzene-d5	81%	88%	84%	30-130%
321-60-8	2-Fluorobiphenyl	61%	77%	75%	30-130%
1718-51-0	Terpbenyl-d14	80%	92%	85%	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 non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36564-MS	R36814.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
OP36564-MSD	R36815.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357
MC27677-1	R36816.D	1	01/29/14	KR	01/17/14	OP36564	MSR1357

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6

7.3.3

7

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		53.8	41.0	76	42.8	82	4	40-140/20
208-96-8	Acenaphthylene	ND		53.8	32.1	60	33.6	65	5	40-140/20
120-12-7	Anthracene	ND		53.8	44.3	82	45.4	87	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		53.8	56.0	104	57.5	110	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		53.8	41.1	76	42.4	81	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		53.8	48.3	90	48.9	94	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	0.096	J	53.8	47.4	88	48.8	94	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		53.8	47.1	88	49.4	95	5	40-140/20
218-01-9	Chrysene	ND		53.8	49.6	92	50.5	97	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	0.074	J	53.8	49.6	92	51.1	98	3	40-140/20
206-44-0	Fluoranthene	ND		53.8	51.1	95	52.0	100	2	40-140/20
86-73-7	Fluorene	ND		53.8	44.3	82	45.8	88	3	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	0.072	J	53.8	49.0	91	50.4	97	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		53.8	35.6	66	37.9	73	6	40-140/20
91-57-6	2-Methylnaphthalene	ND		53.8	34.6	64	36.6	70	6	40-140/20
85-01-8	Phenanthrene	0.037	JB	53.8	45.9	85	47.2	91	3	40-140/20
129-00-0	Pyrene	ND		53.8	51.0	95	52.4	101	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27677-1	Limits
4165-60-0	Nitrobenzene-d5	77%	86%	82%	30-130%
321-60-8	2-Fluorobiphenyl	62%	67%	61%	30-130%
1718-51-0	Terphenyl-d14	73%	74%	77%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1357-CC1261	Injection Date:	01/29/14
Lab File ID:	R36803.D	Injection Time:	07:48
Instrument ID:	GCMSR	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	554372	4.28	1843599	5.33	1061409	6.87	1750216	8.29	1337145	11.06	2466116	12.56
Upper Limit [a]	1108744	4.78	3687198	5.83	2122818	7.37	3500432	8.79	2674290	11.56	4932232	13.06
Lower Limit [b]	277186	3.78	921800	4.83	530705	6.37	875108	7.79	668573	10.56	1233058	12.06
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
OP36546-MB	473797	4.27	1568469	5.33	898978	6.87	1438742	8.28	1099952	11.06	2041936	12.56
OP36546-BS	529412	4.27	1738931	5.33	1007456	6.87	1619659	8.29	1274766	11.06	2339813	12.56
OP36546-BSD	563274	4.27	1839696	5.33	1061228	6.87	1689407	8.28	1321948	11.06	2423204	12.56
ZZZZZZ	459318	4.27	1513513	5.33	873272	6.87	1399250	8.28	1079230	11.06	2001185	12.56
ZZZZZZ	513190	4.27	1688328	5.33	975676	6.87	1564269	8.28	1203986	11.06	2256408	12.56
ZZZZZZ	461122	4.27	1544108	5.33	896137	6.87	1442452	8.28	1086061	11.06	1997433	12.56
OP36564-MB	520579	4.28	1719811	5.33	985356	6.87	1598422	8.28	1233290	11.06	2282036	12.56
OP36564-BS	487049	4.28	1598085	5.33	911149	6.87	1481376	8.29	1183394	11.06	2101618	12.56
OP36564-MS	576849	4.28	1872694	5.33	1072581	6.87	1732138	8.29	1363114	11.06	2436723	12.56
OP36564-MSD	568850	4.28	1854634	5.33	1064848	6.87	1718338	8.29	1352471	11.06	2404903	12.56
MC27677-1	493613	4.28	1637573	5.33	936060	6.87	1524724	8.28	1174540	11.06	2137786	12.56
MC27677-2	544141	4.28	1792082	5.33	1033514	6.87	1682242	8.28	1303640	11.06	2421359	12.56
MC27677-3	518020	4.28	1712697	5.33	980128	6.87	1601215	8.28	1239482	11.06	2292607	12.56
MC27677-4	435373	4.28	1442516	5.33	828106	6.87	1343609	8.28	1044123	11.06	1903558	12.56
MC27677-5	524324	4.28	1737911	5.33	994270	6.87	1623278	8.28	1245024	11.06	2268623	12.56
MC27677-6	477118	4.28	1584723	5.33	906164	6.87	1473034	8.28	1145824	11.06	2102117	12.56
ZZZZZZ	421639	4.28	1420604	5.33	821282	6.87	1317369	8.28	1050810	11.06	1848488	12.56

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphtbalene-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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1360-CC1262	Injection Date:	01/30/14
Lab File ID:	R36866.D	Injection Time:	11:22
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	265533	4.23	1017400	5.29	611359	6.82	1070021	8.12	1208161	10.73	1079213	12.45
Upper Limit [a]	531066	4.73	2034800	5.79	1222718	7.32	2140042	8.62	2416322	11.23	2158426	12.95
Lower Limit [b]	132767	3.73	508700	4.79	305680	6.32	535011	7.62	604081	10.23	539607	11.95
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
MC27677-3 [c]	285717	4.23	1099041	5.29	676200	6.82	1169505	8.11	1214571	10.72	1120091	12.45
ZZZZZZ	272422	4.23	1017662	5.29	634123	6.82	1104409	8.11	1254525	10.72	1162078	12.45
OP36684-MB	253480	4.23	952714	5.29	584700	6.82	1006356	8.11	1050032	10.72	1002269	12.45
OP36684-BS	275548	4.23	1030022	5.29	620414	6.82	1079948	8.11	1147662	10.73	1040607	12.45
OP36684-MS	291382	4.23	1122932	5.29	736654	6.82	1443674	8.12	1469331	10.73	1336250	12.46
OP36684-MSD	297542	4.23	1133371	5.29	748658	6.82	1443274	8.12	1499198	10.73	1364581	12.46
MC27831-1	278345	4.23	1094875	5.29	717874	6.82	1387351	8.12	1432949	10.73	1309004	12.46
ZZZZZZ	274834	4.23	1059180	5.29	657205	6.82	1301462	8.11	1311629	10.73	1219376	12.45
ZZZZZZ	288453	4.23	1092055	5.29	736984	6.82	1470655	8.12	1381829	10.73	1261291	12.45

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.
(c) Confirmation run for surrogate recoveries.

7.4.2

7

Semivolatile Internal Standard Area Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	W17393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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	62557	4.48	241630	5.55	164010	7.10	289333	8.40	285398	11.11	259098	12.89
Upper Limit [a]	125114	4.98	483260	6.05	328020	7.60	578666	8.90	570796	11.61	518196	13.39
Lower Limit [b]	31279	3.98	120815	5.05	82005	6.60	144667	7.90	142699	10.61	129549	12.39
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
OP36573-MSD	51600	4.48	190131	5.55	128488	7.10	220953	8.40	218789	11.11	199324	12.88
OP36620-MB	45862	4.48	171683	5.55	116403	7.09	211050	8.39	214282	11.10	200174	12.88
OP36620-BS	45909	4.48	170101	5.55	113627	7.10	193051	8.40	187125	11.11	171996	12.88
OP36620-MS	44598	4.48	166443	5.55	112276	7.10	193739	8.40	188534	11.11	171696	12.88
OP36620-MSD	43903	4.48	165388	5.55	112667	7.10	193301	8.40	191069	11.11	173530	12.88
MC27500-15	48317	4.48	181787	5.55	122934	7.09	213141	8.39	215160	11.10	200306	12.88
OP36563-MB	54118	4.48	200323	5.55	135366	7.10	232394	8.39	233497	11.10	220000	12.88
OP36563-BS	48812	4.48	182943	5.55	126214	7.10	217602	8.40	212988	11.11	195739	12.88
OP36563-MS	55916	4.48	209206	5.55	140461	7.10	244558	8.40	238395	11.11	221713	12.88
OP36563-MSD	56353	4.48	210312	5.55	143282	7.10	244228	8.40	239235	11.11	220906	12.88
MC27677-1	54709	4.48	199963	5.55	134961	7.09	231738	8.39	235112	11.10	219462	12.88
ZZZZZZ	54563	4.48	203471	5.55	137740	7.09	236842	8.39	238154	11.10	222161	12.88
MC27677-2	61301	4.48	230387	5.55	154264	7.10	269640	8.39	272751	11.10	253622	12.88
MC27677-3	57755	4.48	213449	5.55	146595	7.09	249372	8.39	250888	11.10	231448	12.88
MC27677-4	50853	4.48	189728	5.55	128577	7.09	220989	8.39	220023	11.10	204076	12.88
MC27677-5	55848	4.48	213248	5.55	142653	7.09	246402	8.39	245601	11.10	229553	12.88
MC27677-6	53240	4.48	196467	5.55	133356	7.09	228689	8.39	225563	11.10	213548	12.88
ZZZZZZ	52274	4.48	192442	5.55	130055	7.09	228547	8.39	228730	11.10	212344	12.88
ZZZZZZ	54439	4.48	200602	5.55	136943	7.09	237044	8.39	240182	11.10	221646	12.88
ZZZZZZ	58150	4.48	207725	5.55	137150	7.09	227587	8.39	222648	11.11	208058	12.88
ZZZZZZ	54910	4.48	207479	5.55	138901	7.09	240133	8.39	240756	11.10	219052	12.88
ZZZZZZ	58503	4.48	215219	5.55	143541	7.09	247033	8.39	246022	11.11	225669	12.88
ZZZZZZ	52722	4.48	197534	5.55	132861	7.09	225541	8.39	222046	11.10	206645	12.88
ZZZZZZ	58030	4.48	215283	5.55	144996	7.09	250030	8.39	254277	11.10	236176	12.88
ZZZZZZ	63690	4.48	235910	5.55	150881	7.09	252450	8.39	223048	11.10	191703	12.88
ZZZZZZ	61578	4.48	231467	5.55	152070	7.09	255098	8.39	236051	11.10	211469	12.88
ZZZZZZ	57035	4.49	178697	5.57	143478	7.13	188566	8.43	203038	11.12	197699	12.89
ZZZZZZ	61983	4.48	207544	5.56	137495	7.11	213808	8.41	223896	11.11	200991	12.88

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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	W17393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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 Internal Standard Area Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW769-CC768	Injection Date:	01/31/14
Lab File ID:	W17504.D	Injection Time:	14:03
Instrument ID:	GCMSW	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	127972	4.43	485501	5.50	334388	7.04	591866	8.34	597548	11.03	565363	12.80
Upper Limit [a]	255944	4.93	971002	6.00	668776	7.54	1183732	8.84	1195096	11.53	1130726	13.30
Lower Limit [b]	63986	3.93	242751	5.00	167194	6.54	295933	7.84	298774	10.53	282682	12.30
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
MC27677-1 [c]	99524	4.43	380576	5.50	256672	7.04	451897	8.33	473715	11.02	450981	12.79
OP36696-MB	122189	4.43	468126	5.50	314512	7.04	534810	8.34	557696	11.02	507871	12.79
OP36696-BS	120938	4.43	452433	5.50	309501	7.04	547614	8.34	556140	11.03	512591	12.79
OP36696-MS1	116668	4.43	434416	5.50	310319	7.04	506919	8.34	524219	11.03	495638	12.80
OP36696-MSD1	107431	4.43	407960	5.50	268557	7.04	462763	8.34	478038	11.03	452505	12.80
MC27977-1	105019	4.43	397827	5.50	269803	7.04	460242	8.34	479909	11.03	453703	12.79
ZZZZZZ	113960	4.43	423479	5.50	284797	7.04	489764	8.34	494820	11.02	465494	12.79
ZZZZZZ	118138	4.43	453493	5.50	290057	7.04	488959	8.34	490112	11.03	458896	12.80
ZZZZZZ	138491	4.43	518874	5.50	342103	7.04	571821	8.34	590476	11.02	548644	12.79
ZZZZZZ	128565	4.43	482434	5.50	318222	7.04	524619	8.34	524673	11.02	492702	12.79
ZZZZZZ	127617	4.43	475544	5.50	304916	7.04	503618	8.34	496909	11.03	468850	12.80
ZZZZZZ	115279	4.43	444808	5.50	299639	7.04	513205	8.34	522614	11.02	477473	12.79
ZZZZZZ	117456	4.43	441651	5.50	290607	7.04	487510	8.33	464333	11.02	430642	12.79
ZZZZZZ	116556	4.43	453160	5.50	302217	7.04	527013	8.33	541412	11.02	512409	12.79
ZZZZZZ	133300	4.43	499647	5.50	333145	7.04	569029	8.33	581304	11.02	547796	12.79
ZZZZZZ	183163	4.43	682316	5.50	441310	7.04	733255	8.33	698534	11.02	639754	12.79
ZZZZZZ	152850	4.43	544393	5.50	354327	7.04	571235	8.34	598677	11.02	581314	12.79

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) Sample re-extracted beyond recommended holding time.

7.4.4

Semivolatile Surrogate Recovery Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27677-1	W17505.D	18.0	16.0	54.0	75.0	73.0	86.0
MC27677-1	W17404.D	10.0* [a]	8.0* [a]	27.0	66.0	63.0	89.0
MC27677-2	W17406.D	19.0	15.0	42.0	63.0	61.0	80.0
MC27677-3	R36867.D	13.0* [b]	10.0* [b]	12.0* [b]	67.0	52.0	73.0
MC27677-3	W17407.D	15.0	11.0* [b]	18.0	56.0	54.0	80.0
MC27677-4	W17408.D	45.0	35.0	98.0	67.0	64.0	97.0
MC27677-5	W17409.D	32.0	23.0	63.0	58.0	55.0	82.0
MC27677-6	W17410.D	26.0	18.0	61.0	38.0	36.0	71.0
OP36563-BS	W17401.D	49.0	32.0	100.0	67.0	68.0	87.0
OP36563-MB	W17400.D	50.0	33.0	99.0	72.0	74.0	91.0
OP36563-MS	W17402.D	35.0	28.0	86.0	63.0	61.0	87.0
OP36563-MSD	W17403.D	40.0	27.0	88.0	70.0	68.0	88.0
OP36696-BS	W17507.D	54.0	37.0	94.0	86.0	82.0	92.0
OP36696-MB	W17506.D	48.0	33.0	88.0	78.0	76.0	89.0
OP36696-MS1	W17508.D	51.0	41.0	82.0	81.0	61.0	80.0
OP36696-MSD1	W17509.D	50.0	49.0	95.0	88.0	77.0	92.0

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. Sample re-extracted/reanalyzed.
(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27677-1	R36816.D	82.0	61.0	77.0
MC27677-2	R36817.D	80.0	61.0	69.0
MC27677-3	R36818.D	68.0	53.0	70.0
MC27677-4	R36819.D	82.0	63.0	82.0
MC27677-5	R36820.D	67.0	54.0	70.0
MC27677-6	R36821.D	48.0	35.0	60.0
OP36564-BS	R36813.D	81.0	67.0	73.0
OP36564-MB	R36812.D	89.0	73.0	79.0
OP36564-MS	R36814.D	77.0	62.0	73.0
OP36564-MSD	R36815.D	86.0	67.0	74.0

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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36562-MB	BK34036.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118

The QC reported here applies to the following samples: Method: SW846 8011

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-8

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	75%	36-173%
460-00-4	Bromofluorobenzene (S)	73%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36562-BS	BK34037.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118

The QC reported here applies to the following samples: Method: SW846 8011

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.053	75	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)	79%	36-173%
460-00-4	Bromofluorobenzene (S)	70%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36562-MS	BK34038.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
OP36562-MSD	BK34039.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118
MC27677-1	BK34040.D	1	01/17/14	NK	01/17/14	OP36562	GBK1118

The QC reported here applies to the following samples: Method: SW846 8011

MC27677-1, MC27677-2, MC27677-3, MC27677-4, MC27677-5, MC27677-6, MC27677-8

CAS No.	Compound	MC27677-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0688	0.053	77	0.051	72	4	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0688	0.056	81	0.055	78	2	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27677-1	Limits
460-00-4	Bromofluorobenzene (S)	56%	69%	74%	36-173%
460-00-4	Bromofluorobenzene (S)	64%	74%	81%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27677-1	BK34040.D	74.0	81.0
MC27677-2	BK34041.D	85.0	85.0
MC27677-3	BK34042.D	83.0	77.0
MC27677-4	BK34043.D	78.0	76.0
MC27677-5	BK34044.D	82.0	76.0
MC27677-6	BK34045.D	82.0	74.0
MC27677-8	BK34047.D	77.0	73.0
OP36562-BS	BK34037.D	79.0	70.0
OP36562-MB	BK34036.D	75.0	73.0
OP36562-MS	BK34038.D	56.0	64.0
OP36562-MSD	BK34039.D	69.0	74.0

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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1118-ICC1118	Injection Date:	01/17/14
Lab File ID:	BK34031.D	Injection Time:	12:33
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.40	4.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34034A.D	01/17/14	13:44	4.40	4.46
OP36562-MB	BK34036.D	01/17/14	14:30	4.40	4.46
OP36562-BS	BK34037.D	01/17/14	14:54	4.40	4.47
OP36562-MS	BK34038.D	01/17/14	15:17	4.40	4.46
OP36562-MSD	BK34039.D	01/17/14	15:40	4.40	4.46
MC27677-1	BK34040.D	01/17/14	16:04	4.40	4.46
MC27677-2	BK34041.D	01/17/14	16:27	4.40	4.46
MC27677-3	BK34042.D	01/17/14	16:51	4.40	4.46
MC27677-4	BK34043.D	01/17/14	17:14	4.40	4.46
MC27677-5	BK34044.D	01/17/14	17:37	4.40	4.46
MC27677-6	BK34045.D	01/17/14	18:00	4.40	4.46

Surrogate Compounds

S1 = Bromofluorohenzene (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: MC27677
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1118-CC1118	Injection Date:	01/17/14
Lab File ID:	BK34046.D	Injection Time:	18:23
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.40	4.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC27677-8	BK34047.D	01/17/14	18:46	4.40	4.46
ZZZZZZ	BK34048.D	01/17/14	19:09	4.40	4.46
ZZZZZZ	BK34049.D	01/17/14	19:32	4.40	4.46
ZZZZZZ	BK34050.D	01/17/14	19:55	4.40	4.46
ZZZZZZ	BK34051.D	01/17/14	20:19	4.40	4.46
GBK1118-ECC111	BK34052.D	01/17/14	20:42	4.40	4.46

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC27745

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/24/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW6D-ROX-011614	MW6C-ROX-011614
MW6B-ROX-011614	MW6A-ROX-011614-EB
MW6A-ROX-011614	MW6A-ROX-011614-Dup
MW3-ROX-011614	TB-ROX-011614-HCL
TB-ROX-011614-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 sample MW3-ROX-011614 was re-extracted outside of extraction holding time criteria. The VOC compound, acetone was detected in the trip blank. VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC acid-fraction surrogates 2-fluorophenol, and phenol-d_5 were outside evaluation criteria in sample MW3-ROX-011614 (re-sampled February 13, 2014 with reproducibly low acid-fraction surrogate recoveries). VOC MS/MSD recoveries were outside evaluation criteria in sample MW6D-ROX-011614. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 0.2ºC, which is outside the 4ºC ± 2ºC criteria. Samples were received in good condition; therefore, no qualification of data was required. Additionally, the laboratory issued a letter indicating that VOC samples, including trip blanks, were received headspace free, and that the cooler receipt form had been incorrectly marked as not applicable with regards to trip blanks and VOC headspace.

3.0 Holding Times

Were samples extracted/analyzed within applicable limits?

No, sample MW3-ROX-011614 was re-extracted 5 days outside of extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates possible matrix interference. Holding time exceedances were not greater than two times (2X) holding

time criteria. Analytical data associated with extraction holding times outside criteria were reported from the original analysis run; no qualification of data was required based on holding time criteria.

4.0 Blank Contamination

Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
TB-ROX-011614-HCL	VOCs	Acetone	5.2 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required 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
MSV1029-BS	VOCs	Acrolein	**157**	NA	70-130
MSV1029-BS	VOCs	2-Chloroethyl vinyl ether	**214**	NA	70-130
OP36591-BS/BSD	SVOCs	Benzoic acid	**21/22**	2	30-130/20
OP36591-BS/BSD	SVOCs	4-Nitrophenol	30/**27**	11	30-130/20
OP36591-BS/BSD	SVOCs	Phenol	31/**29**	5	30-130/20
OP36591-BS/BSD	SVOCs	Hexachlorocyclopentadiene	**34/33**	4	40-140/20
OP36591-BS/BSD	SVOCs	n-Nitrosodimethylamine	40/**38**	5	40-140/20
OP36591-BS/BSD	SVOCs	Pyridine	**37/33**	11	40-140/20

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. OP36591-BS/BSD was associated with the equipment blank. Equipment blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW6D-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW6D-ROX-011614	SVOCs	Phenol	**UJ**
MW6D-ROX-011614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6D-ROX-011614	SVOCs	n-Nitrosodimethylamine	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW6D-ROX-011614	SVOCs	Pyridine	**UJ**
MW6C-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW6C-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW6C-ROX-011614	SVOCs	Phenol	**UJ**
MW6C-ROX-011614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6C-ROX-011614	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6C-ROX-011614	SVOCs	Pyridine	**UJ**
MW6B-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW6B-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW6B-ROX-011614	SVOCs	Phenol	**UJ**
MW6B-ROX-011614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6B-ROX-011614	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6B-ROX-011614	SVOCs	Pyridine	**UJ**
MW6A-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW6A-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW6A-ROX-011614	SVOCs	Phenol	**UJ**
MW6A-ROX-011614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6A-ROX-011614	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6A-ROX-011614	SVOCs	Pyridine	**UJ**
MW6A-ROX-011614-Dup	SVOCs	Benzoic acid	**UJ**
MW6A-ROX-011614-Dup	SVOCs	4-Nitrophenol	**UJ**
MW6A-ROX-011614-Dup	SVOCs	Phenol	**UJ**
MW6A-ROX-011614-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW6A-ROX-011614-Dup	SVOCs	n-Nitrosodimethylamine	**UJ**
MW6A-ROX-011614-Dup	SVOCs	Pyridine	**UJ**
MW3-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW3-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW3-ROX-011614	SVOCs	Phenol	**UJ**
MW3-ROX-011614	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW3-ROX-011614	SVOCs	n-Nitrosodimethylamine	**UJ**
MW3-ROX-011614	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW3-ROX-011614-Run#1	SVOCs	2-Fluorophenol	**1**	15-110
MW3-ROX-011614-Run#2	SVOCs	2-Fluorophenol	**2**	15-110
MW3-ROX-011614-Run#1	SVOCs	Phenol-d_5	**2**	15-110
MW3-ROX-011614-Run#2	SVOCs	Phenol-d_5	**1**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Sample MW3-ROX-011614 was resampled on February 13, 2014. The associated acid-fraction surrogate recoveries (SDG 28321) were reproducibly low for the

re-samples, indicating possible matrix interference.

Sample ID	Parameter	Analyte	Qualification
MW3-ROX-011614	SVOCs	Benzoic acid	**UJ**
MW3-ROX-011614	SVOCs	2-Chlorophenol	**UJ**
MW3-ROX-011614	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW3-ROX-011614	SVOCs	2,4-Dichlorophenol	**UJ**
MW3-ROX-011614	SVOCs	2,4-Dimethylphenol	**UJ**
MW3-ROX-011614	SVOCs	2,4-Dinitrophenol	**UJ**
MW3-ROX-011614	SVOCs	4,6-Dinitro-o-cresol	**UJ**
MW3-ROX-011614	SVOCs	2-Methylphenol	**UJ**
MW3-ROX-011614	SVOCs	3&4-Methylphenol	**UJ**
MW3-ROX-011614	SVOCs	2-Nitrophenol	**UJ**
MW3-ROX-011614	SVOCs	4-Nitrophenol	**UJ**
MW3-ROX-011614	SVOCs	Pentachlorophenol	**UJ**
MW3-ROX-011614	SVOCs	Phenol	**UJ**
MW3-ROX-011614	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW3-ROX-011614	SVOCs	2,4,6-Trichlorophenol	**UJ**

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample MW6D-ROX-011614 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
MW6D-ROX-011614	VOCs	Acetone	**60/64**	6	70-130/30
MW6D-ROX-011614	VOCs	Acrolein	129/**131**	2	70-130/30
MW6D-ROX-011614	VOCs	Benzene	**132**/122	8	70-130/30
MW6D-ROX-011614	VOCs	2-Chloroethyl vinyl ether	**0/0**	NA	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of compounds 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
MW6A-ROX-011614	MW6A-ROX-011614-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

New England ACCUTEST LABORATORIES

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27745

Sampling Date: 01/16/14

Report to:

URS Corporation

elizabetb.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **103**

Reviewed on 2/24/2014

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 (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: MC27745

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27745-1	01/16/14	09:10		01/17/14	AQ	Ground Water	MW6D-ROX-011614
MC27745-2	01/16/14	10:05		01/17/14	AQ	Ground Water	MW6C-ROX-011614
MC27745-3	01/16/14	11:00		01/17/14	AQ	Ground Water	MW6B-ROX-011614
MC27745-4	01/16/14	11:15		01/17/14	AQ	Ground Water	MW6A-ROX-011614-EB
MC27745-5	01/16/14	12:10		01/17/14	AQ	Ground Water	MW6A-ROX-011614
MC27745-6	01/16/14	12:10		01/17/14	AQ	Ground Water	MW6A-ROX-011614-DUP
MC27745-7	01/16/14	14:30		01/17/14	AQ	Ground Water	MW3-ROX-011614
MC27745-8	01/16/14	00:00		01/17/14	AQ	Trip Blank Water	TB-ROX-011614-HCL
MC27745-9	01/16/14	00:00		01/17/14	AQ	Trip Blank Water	TB-ROX-011614-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC27745
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Centra	Report Date	2/3/2014 10:54:50 AM

7 Sample(s) and 2 Trip Blank(s) were collected on 01/16/2014 and were received at Accutest on 01/17/2014 properly preserved, at 0.2 Deg. C and intact. These Samples received an Accutest job number of MC27745. 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: MSV1029

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27745-1MS, MC27745-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification stdanard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceeded 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Associated samples are non-detect for this compound.
- MC27745-1MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Benzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Calibration check stdanard MSV1029-CC1019 for 2-chloroethyl vinyl ether exceeded 40% Difference (response biased high). Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP36591

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-10MS, MC27500-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP36592-BS Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 4-Nitrophenol, Hexachlorocyclopentadiene, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 4-Nitrophenol, Hexachlorocyclopentadiene, Phenol, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP36592-BSD Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene, 4-Nitrophenol, Phenol, n-Nitrosodimethylamine, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP36591-MSD for Benzoic Acid, n-Nitrosodimethylamine: Outside control limits. Blank Spike meets program technical requirements.
- OP36591-MS for Benzoic Acid: Outside control limits. Blank Spike meets program technical requirements.
- MC27745-7 for Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Matrix: AQ	Batch ID: OP36652

- MC27745-7 was re-extracted outside of holding time.
- MC27745-7 for Phenol-d5, 2-Fluorophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- MC27745-7: Confirmation run.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP36592

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-12MS, MC27500-12MSD 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: OP36605

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-13MS, MC27500-13MSD 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(MC27745).

ACCUTEST
LABORATORIES

Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Drive West Suite 300
St. Louis, MO 63110

RE: Accutest job # MC27745

Ms. Kunkel,

On the report for SDG MC27745, the sample receipt confirmation was marked incorrectly by the lab. The SDG did have a trip blank that was received in the cooler, the trip blank was marked on the COC and the vials that were sent for VOC analysis were received headspace free.

Sincerely,

Matthew Morrell
Accutest Laboratories of New England, Inc.

Summary of Hits

Job Number: MC27745
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/16/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27745-1	MW6D-ROX-011614					
Methyl Tert Butyl Ether		0.61 J	1.0	0.43	ug/l	SW846 8260C
MC27745-2	MW6C-ROX-011614					
Methyl Tert Butyl Ether		0.68 J	1.0	0.43	ug/l	SW846 8260C
Benzo(g,h,i)perylene		0.041 J	0.11	0.029	ug/l	SW846 8270D BY SIM
MC27745-3	MW6B-ROX-011614					
Methyl Tert Butyl Ether		6.9	1.0	0.43	ug/l	SW846 8260C
Benzo(g,h,i)perylene		0.051 J	0.11	0.029	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.042 J	0.11	0.034	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.043 J	0.11	0.033	ug/l	SW846 8270D BY SIM
MC27745-4	MW6A-ROX-011614-EB					
No hits reported in this sample.						
MC27745-5	MW6A-ROX-011614					
Methyl Tert Butyl Ether		10.8	1.0	0.43	ug/l	SW846 8260C
MC27745-6	MW6A-ROX-011614-DUP					
Methyl Tert Butyl Ether		10.3	1.0	0.43	ug/l	SW846 8260C
MC27745-7	MW3-ROX-011614					
No hits reported in this sample.						
MC27745-8	TB-ROX-011614-HCL					
Acetone		5.2 J	10	2.8	ug/l	SW846 8260C
MC27745-9	TB-ROX-011614-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW6D-ROX-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.61	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71279.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ng/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	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-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phtbalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	63%		15-110%
4165-60-0	Nitrobenzene-d5	55%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	67%		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:	MW6D-ROX-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36660.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH 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,b)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	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	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	81%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	60%		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:	MW6D-ROX-011614		
Lab Sample ID:	MC27745-1	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87638.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		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:	MW6C-ROX-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27257.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.68	1.0	0.43	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW6C-ROX-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	99%		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	

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-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71280.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	ng/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 presnmptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6C-ROX-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	33%		15-110%
4165-62-2	Phenol-d5	23%		15-110%
118-79-6	2,4,6-Tribromophenol	68%		15-110%
4165-60-0	Nitrobenzene-d5	49%		30-130%
321-60-8	2-Fluorobiphenyl	58%		30-130%
1718-51-0	Terphenyl-d14	61%		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:	MW6C-ROX-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36661.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH 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	0.041	0.11	0.029	ug/l	J
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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	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	76%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	56%		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:	MW6C-ROX-011614		
Lab Sample ID:	MC27745-2	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87639.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	95%		36-173%
460-00-4	Bromofluorobenzeue (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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27258.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylouitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.9	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	99%		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	

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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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71281.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ng/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	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	27%		15-110%
4165-62-2	Phenol-d5	21%		15-110%
118-79-6	2,4,6-Tribromophenol	74%		15-110%
4165-60-0	Nitrobenzene-d5	50%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	77%		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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36662.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	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	0.051	0.11	0.029	ug/l	J
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	0.042	0.11	0.034	ug/l	J
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	0.043	0.11	0.033	ug/l	J
90-12-0	1-Methylnaphthalene	ND	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.080	ug/l	
85-01-8	Phenanthrene	ND	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	75%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	72%		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:	MW6B-ROX-011614		
Lab Sample ID:	MC27745-3	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87640.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	98%		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

Report of Analysis

Client Sample ID:	MW6A-ROX-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27259.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Bntylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	MW6A-ROX-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	99%		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	

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-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71282.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	ug/l	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW6A-ROX-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	25%		15-110%
4165-62-2	Phenol-d5	18%		15-110%
118-79-6	2,4,6-Tribromophenol	50%		15-110%
4165-60-0	Nitrobenzene-d5	36%		30-130%
321-60-8	2-Fluorobiphenyl	41%		30-130%
1718-51-0	Terphenyl-d14	74%		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
E = Indicates value exceeds calibration range
J = Indicates 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-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36663.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	0.032	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.027	ug/l	
207-08-9	Benzo(k)fluorantheue	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	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	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	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		30-130%
321-60-8	2-Fluorobiphenyl	43%		30-130%
1718-51-0	Terphenyl-d14	67%		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:	MW6A-ROX-011614-EB		
Lab Sample ID:	MC27745-4	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87642.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
Run #2							

	Initial Volume	Final Volume
Run #1	37.3 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	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	121%		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:	MW6A-ROX-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, 1L		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27260.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Bntylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	MW6A-ROX-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.8	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	MW6A-ROX-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		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	

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-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71283.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	UJ
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	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-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	84%		15-110%
4165-60-0	Nitrobenzene-d5	52%		30-130%
321-60-8	2-Fluorobiphenyl	59%		30-130%
1718-51-0	Terphenyl-d14	72%		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
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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:	MW6A-ROX-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36664.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH 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	Anthraceue	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	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.076	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	77%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	67%		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:	MW6A-ROX-011614		
Lab Sample ID:	MC27745-5	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87643.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 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	0.015	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	120%		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

Report of Analysis

Client Sample ID:	MW6A-ROX-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27261.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	10.3	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	99%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71284.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	UJ
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chloropbenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Diuitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	79%		15-110%
4165-60-0	Nitrobenzene-d5	50%		30-130%
321-60-8	2-Fluorobiphenyl	57%		30-130%
1718-51-0	Terphenyl-d14	70%		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:	MW6A-ROX-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36665.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH 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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	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	74%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	64%		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:	MW6A-ROX-011614-DUP		
Lab Sample ID:	MC27745-6	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87644.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		36-173%
460-00-4	Bromofluorobenzene (S)	86%		36-173%

ND = Not detected MDL - Method Detectiou 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-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27262.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ng/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ng/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	98%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71285.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
Run #2 [a]	W17437.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2	970 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ng/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phtbalate	ND	5.3	0.46	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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:	MW3-ROX-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	UJ
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	ug/l	
110-86-1	Pyridine	ND	11	0.54	ng/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	1% [b]	2% [b]	15-110%
4165-62-2	Phenol-d5	2% [b]	1% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	20%	21%	15-110%
4165-60-0	Nitrobenzene-d5	44%	70%	30-130%
321-60-8	2-Fluorobiphenyl	50%	75%	30-130%
1718-51-0	Terphenyl-d14	66%	95%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/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:	MW3-ROX-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36666.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphtbylene	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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	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	53%		30-130%
1718-51-0	Terphenyl-d14	59%		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-011614		
Lab Sample ID:	MC27745-7	Date Sampled:	01/16/14
Matrix:	AQ - Ground Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87645.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		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-011614-HCL		
Lab Sample ID:	MC27745-8	Date Sampled:	01/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27253.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	5.2	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011614-HCL		
Lab Sample ID:	MC27745-8	Date Sampled:	01/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011614-HCL		
Lab Sample ID:	MC27745-8	Date Sampled:	01/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/17/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 Soutb 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	99%		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	

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-011614-ST		
Lab Sample ID:	MC27745-9	Date Sampled:	01/16/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/17/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87646.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0052	ug/l	
106-93-4	1,2-Dihromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorohenzene (S)	84%		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

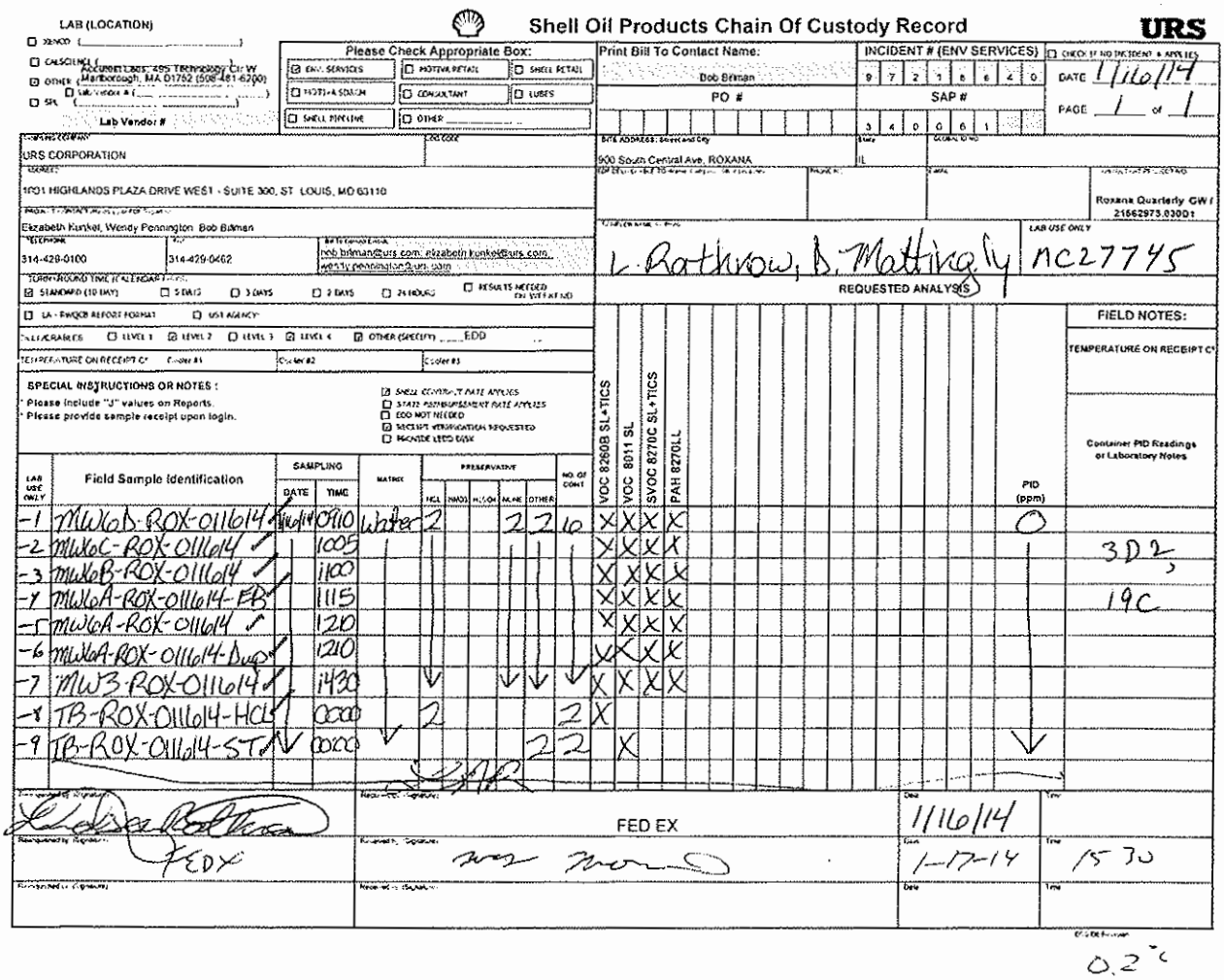
New England ACCUTEST LABORATORIES

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 Labs, 495 Technology Ctr 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 SOUTH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bilman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 8 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE 1/16/14

PAGE 1 of 1

Sampling Company: URS CORPORATION

Cost Code:

Address: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Project Contact (Name of Person): Elizabeth Kunkel, Wendy Pennington, Bob Bilman

Telephone: 314-429-0100 Fax: 314-429-0462

Bill to Contact Name: bob.bilman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

Site Address: Street and City: 900 South Central Ave, ROXANA

State: IL

Global ID No.:

Zip Code: Lat Long Lat Long Lat Long

Project No.:

Name:

Instructions Project No.: Roxana Quarterly GW / 21562973.030D1

Sampler Name or Phone: L. Rathrow, D. Mattingly

Lab Use Only: MC27745

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 REIMBURSEMENT RATE APPLIES
☐ EDD 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 HCL	Preservative HNO3	Preservative H2SO4	Preservative NONE	Preservative OTHER	No. of Cont.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW6D-ROX-011614	1/16/14	0910	Water	2			2	2	6	X	X	X	X	0	
-2	MW6C-ROX-011614		1005								X	X	X	X		3D2,
-3	MW6B-ROX-011614		1100								X	X	X	X		
-4	MW6A-ROX-011614-EB		1115								X	X	X	X		19C
-5	MW6A-ROX-011614		1210								X	X	X	X		
-6	MW6A-ROX-011614-Dup		1210								X	X	X	X		
-7	MW3-ROX-011614		1430								X	X	X	X		
-8	TB-ROX-011614-HCL		0000		2					2	X					
-9	TB-ROX-011614-ST		0000						2	2		X				

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/16/14	
FEDX	[signature]	1-17-14	1530

0.2°C

5.1

5

MC27745: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27745 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/17/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: URS **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 or N	N/A
1. Trip Blank present / cooler:	☐ ☐	☑
2. Trip Blank listed on COC:	☐ ☐	☑
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☐ ☐	☑

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

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

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

Comments

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

MC27745: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27745

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27745-1 Collected: 16-JAN-14 09:10 By: MW6D-ROX-011614			Received: 17-JAN-14		By: NT	
MC27745-1	SW846 8270D	21-JAN-14 19:29	KR	20-JAN-14	NE	AB8270SL+
MC27745-1	SW846 8011	21-JAN-14 23:10	CZ	20-JAN-14	MT	V8011SL
MC27745-1	SW846 8260C	22-JAN-14 13:11	AMY			V8260SL+
MC27745-1	SW846 8270D BY SIM	22-JAN-14 13:13	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-2 Collected: 16-JAN-14 10:05 By: MW6C-ROX-011614			Received: 17-JAN-14		By: NT	
MC27745-2	SW846 8270D	21-JAN-14 19:51	KR	20-JAN-14	NE	AB8270SL+
MC27745-2	SW846 8011	21-JAN-14 23:35	CZ	20-JAN-14	MT	V8011SL
MC27745-2	SW846 8270D BY SIM	22-JAN-14 13:36	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-2	SW846 8260C	22-JAN-14 13:37	AMY			V8260SL+
MC27745-3 Collected: 16-JAN-14 11:00 By: MW6B-ROX-011614			Received: 17-JAN-14		By: NT	
MC27745-3	SW846 8270D	21-JAN-14 20:14	KR	20-JAN-14	NE	AB8270SL+
MC27745-3	SW846 8011	22-JAN-14	CZ	20-JAN-14	MT	V8011SL
MC27745-3	SW846 8270D BY SIM	22-JAN-14 13:59	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-3	SW846 8260C	22-JAN-14 14:03	AMY			V8260SL+
MC27745-4 Collected: 16-JAN-14 11:15 By: MW6A-ROX-011614-EB			Received: 17-JAN-14		By: NT	
MC27745-4	SW846 8270D	21-JAN-14 20:37	KR	20-JAN-14	NE	AB8270SL+
MC27745-4	SW846 8011	22-JAN-14 00:51	CZ	20-JAN-14	MT	V8011SL
MC27745-4	SW846 8270D BY SIM	22-JAN-14 14:22	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-4	SW846 8260C	22-JAN-14 14:30	AMY			V8260SL+
MC27745-5 Collected: 16-JAN-14 12:10 By: MW6A-ROX-011614			Received: 17-JAN-14		By: NT	
MC27745-5	SW846 8270D	21-JAN-14 21:00	KR	20-JAN-14	NE	AB8270SL+
MC27745-5	SW846 8011	22-JAN-14 01:16	CZ	20-JAN-14	MT	V8011SL
MC27745-5	SW846 8270D BY SIM	22-JAN-14 14:45	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-5	SW846 8260C	22-JAN-14 14:56	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27745

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27745-6 Collected: 16-JAN-14 12:10 By: MW6A-ROX-011614-DUP			Received: 17-JAN-14 By: NT			
MC27745-6	SW846 8270D	21-JAN-14 21:23	KR	20-JAN-14	NE	AB8270SL+
MC27745-6	SW846 8011	22-JAN-14 01:42	CZ	20-JAN-14	MT	V8011SL
MC27745-6	SW846 8270D BY SIM	22-JAN-14 15:08	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-6	SW846 8260C	22-JAN-14 15:22	AMY			V8260SL+
MC27745-7 Collected: 16-JAN-14 14:30 By: MW3-ROX-011614			Received: 17-JAN-14 By: NT			
MC27745-7	SW846 8270D	21-JAN-14 21:46	KR	20-JAN-14	NE	AB8270SL+
MC27745-7	SW846 8011	22-JAN-14 02:07	CZ	20-JAN-14	MT	V8011SL
MC27745-7	SW846 8270D BY SIM	22-JAN-14 15:31	KR	20-JAN-14	NE	B8270SIMPAH
MC27745-7	SW846 8260C	22-JAN-14 15:49	AMY			V8260SL+
MC27745-7	SW846 8270D	29-JAN-14 11:26	KR	28-JAN-14	MD	AB8270SL+
MC27745-8 Collected: 16-JAN-14 00:00 By: TB-ROX-011614-HCL			Received: 17-JAN-14 By: NT			
MC27745-8	SW846 8260C	22-JAN-14 11:51	AMY			V8260SL+
MC27745-9 Collected: 16-JAN-14 00:00 By: TB-ROX-011614-ST			Received: 17-JAN-14 By: NT			
MC27745-9	SW846 8011	22-JAN-14 02:32	CZ	20-JAN-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27745-1.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-1.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-1.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-1.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-1.2	VOC Ref #3	Amy Min Yang	01/22/14 16:40	Retrieve from Storage
MC27745-1.2	Amy Min Yang	GCMSV	01/22/14 16:40	Load on Instrument
MC27745-1.2	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-1.2	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-1.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-1.6	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-2.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-2.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-2.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-2.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-2.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-2.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage
MC27745-2.6	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-3.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-3.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-3.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-3.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-3.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-3.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage
MC27745-3.5	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-4.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-4.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-4.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-4.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-4.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-4.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27745-4.6	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-5.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-5.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-5.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-5.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-5.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-5.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage
MC27745-5.5	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-6.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-6.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-6.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-6.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-6.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-6.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage
MC27745-6.6	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-7.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-7.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-7.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-7.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-7.3	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27745-7.4	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	Retrieve from Storage
MC27745-7.5	Walk In Ref #22	Thomas Abruzzise	01/24/14 14:10	Retrieve from Storage
MC27745-7.6	Walk In Ref #22	Marc Tahtamoni	01/20/14 15:11	Retrieve from Storage
MC27745-8.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27745-8.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27745-8.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27745-8.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27745-9.1	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage

5.3

Accutest Internal Chain of Custody

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/17/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27745-9.2	VOC Ref #3	Marc Tahtamoni	01/21/14 09:16	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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

6.1.1

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	98%	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	

Blank Spike Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	47.7	95	70-130
107-02-8	Acrolein	50	78.7	157* a	70-130
107-13-1	Acrylonitrile	100	101	101	70-130
71-43-2	Benzene	50	53.9	108	70-130
108-86-1	Bromobenzene	50	54.4	109	70-130
74-97-5	Bromochloromethane	50	53.1	106	70-130
75-27-4	Bromodichloromethane	50	57.7	115	70-130
75-25-2	Bromoform	50	45.6	91	70-130
74-83-9	Bromomethane	50	49.3	99	70-130
78-93-3	2-Butanone (MEK)	50	47.8	96	70-130
104-51-8	n-Butylbenzene	50	58.2	116	70-130
135-98-8	sec-Butylbenzene	50	59.8	120	70-130
98-06-6	tert-Butylbenzene	50	59.9	120	70-130
75-15-0	Carbon disulfide	50	47.8	96	70-130
56-23-5	Carbon tetrachloride	50	60.7	121	70-130
108-90-7	Chlorobenzene	50	47.9	96	70-130
75-00-3	Chloroethane	50	59.0	118	70-130
110-75-8	2-Chloroethyl vinyl ether	50	107	214* a	70-130
67-66-3	Chloroform	50	51.5	103	70-130
74-87-3	Chloromethane	50	48.0	96	70-130
95-49-8	o-Chlorotoluene	50	53.9	108	70-130
106-43-4	p-Chlorotoluene	50	54.9	110	70-130
124-48-1	Dibromochloromethane	50	58.7	117	70-130
95-50-1	1,2-Dichlorobenzene	50	50.0	100	70-130
541-73-1	1,3-Dichlorobenzene	50	51.0	102	70-130
106-46-7	1,4-Dichlorobenzene	50	50.7	101	70-130
75-71-8	Dichlorodifluoromethane	50	54.0	108	70-130
75-34-3	1,1-Dichloroethane	50	53.5	107	70-130
107-06-2	1,2-Dichloroethane	50	54.0	108	70-130
75-35-4	1,1-Dichloroethene	50	54.9	110	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.5	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.1	106	70-130
78-87-5	1,2-Dichloropropane	50	52.2	104	70-130
142-28-9	1,3-Dichloropropane	50	51.8	104	70-130
594-20-7	2,2-Dichloropropane	50	63.6	127	70-130
563-58-6	1,1-Dichloropropene	50	54.9	110	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

6.2.1

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	50.2	100	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.2	104	70-130
123-91-1	1,4-Dioxane	250	232	93	70-130
97-63-2	Ethyl methacrylate	50	48.9	98	77-137
100-41-4	Ethylbenzene	50	55.1	110	70-130
87-68-3	Hexachlorobutadiene	50	60.3	121	70-130
591-78-6	2-Hexanone	50	46.6	93	70-130
98-82-8	Isopropylbenzene	50	60.7	121	70-130
99-87-6	p-Isopropyltoluene	50	58.0	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.5	113	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.6	107	70-130
74-95-3	Methylene bromide	50	52.6	105	70-130
75-09-2	Methylene chloride	50	49.4	99	70-130
91-20-3	Naphthalene	50	53.0	106	70-130
103-65-1	n-Propylbenzene	50	57.6	115	70-130
100-42-5	Styrene	50	50.9	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.0	110	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.0	102	70-130
127-18-4	Tetrachloroethene	50	56.4	113	70-130
108-88-3	Toluene	50	56.9	114	70-130
87-61-6	1,2,3-Trichlorobenzene	50	59.1	118	70-130
120-82-1	1,2,4-Trichlorobenzene	50	61.9	124	70-130
71-55-6	1,1,1-Trichloroethane	50	59.1	118	70-130
79-00-5	1,1,2-Trichloroethane	50	51.6	103	70-130
79-01-6	Trichloroethene	50	55.9	112	70-130
75-69-4	Trichlorofluoromethane	50	60.7	121	70-130
96-18-4	1,2,3-Trichloropropane	50	54.9	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	58.5	117	70-130
108-67-8	1,3,5-Trimethylbenzene	50	59.7	119	70-130
108-05-4	Vinyl Acetate	50	53.5	107	70-130
75-01-4	Vinyl chloride	50	47.1	94	70-130
	m,p-Xylene	100	92.4	92	70-130
95-47-6	o-Xylene	50	46.3	93	70-130
1330-20-7	Xylene (total)	150	139	93	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	MC27745-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	150	60* a	160	64* a	6	70-130/30
107-02-8	Acrolein	ND		250	322	129	328	131* a	2	70-130/30
107-13-1	Acrylonitrile	ND		500	506	101	507	101	0	70-130/30
71-43-2	Benzene	ND		250	331	132* a	306	122	8	70-130/30
108-86-1	Bromobenzene	ND		250	282	113	276	110	2	70-130/30
74-97-5	Bromochloromethane	ND		250	264	106	264	106	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	258	103	258	103	0	70-130/30
75-25-2	Bromoform	ND		250	215	86	216	86	0	70-130/30
74-83-9	Bromomethane	ND		250	201	80	200	80	0	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	189	76	192	77	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	282	113	288	115	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	299	120	297	119	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	284	114	281	112	1	70-130/30
75-15-0	Carbon disulfide	ND		250	239	96	243	97	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	250	100	255	102	2	70-130/30
108-90-7	Chlorobenzene	ND		250	233	93	235	94	1	70-130/30
75-00-3	Chloroethane	ND		250	239	96	239	96	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		250	240	96	241	96	0	70-130/30
74-87-3	Chloromethane	ND		250	195	78	192	77	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	269	108	267	107	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	272	109	269	108	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	274	110	276	110	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	251	100	249	100	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	257	103	255	102	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	253	101	250	100	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	228	91	230	92	1	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	257	103	258	103	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	229	92	228	91	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	279	112	279	112	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	275	110	274	110	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	266	106	272	109	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	253	101	254	102	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	259	104	256	102	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	287	115	292	117	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	254	102	260	104	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Compound	MC27745-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	240	96	240	96	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	248	99	250	100	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1240	99	1360	109	9	70-130/30
97-63-2	Ethyl methacrylate	ND		250	249	100	250	100	0	72-139/30
100-41-4	Ethylbenzene	ND		250	269	108	271	108	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	275	110	285	114	4	70-130/30
591-78-6	2-Hexanone	ND		250	198	79	198	79	0	70-130/30
98-82-8	Isopropylbenzene	ND		250	311	124	306	122	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	288	115	287	115	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	0.61	J	250	301	120	300	120	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	268	107	275	110	3	70-130/30
74-95-3	Methylene hromide	ND		250	245	98	244	98	0	70-130/30
75-09-2	Methylene chloride	ND		250	250	100	251	100	0	70-130/30
91-20-3	Naphthalene	ND		250	262	105	294	118	12	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	287	115	1	70-130/30
100-42-5	Styrene	ND		250	252	101	252	101	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	258	103	258	103	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	273	109	275	110	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	264	106	269	108	2	70-130/30
108-88-3	Toluene	ND		250	279	112	281	112	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	281	112	308	123	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	299	120	313	125	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	267	107	269	108	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	255	102	257	103	1	70-130/30
79-01-6	Trichloroethene	ND		250	263	105	266	106	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	222	89	221	88	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	277	111	278	111	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	293	117	291	116	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	300	120	297	119	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	254	102	255	102	0	70-130/30
75-01-4	Vinyl chloride	ND		250	191	76	191	76	0	70-130/30
	m,p-Xylene	ND		500	456	91	455	91	0	70-130/30
95-47-6	o-Xylene	ND		250	230	92	231	92	0	70-130/30
1330-20-7	Xylene (total)	ND		750	686	91	686	91	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-8

CAS No.	Surrogate Recoveries	MS	MSD	MC27745-1	Limits
1868-53-7	Dibromofluoromethane	92%	93%	110%	70-130%
2037-26-5	Toluene-D8	98%	98%	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	103%	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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1029-CC1019	Injection Date:	01/22/14
Lab File ID:	V27246.D	Injection Time:	08:45
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	605724	6.58	757292	7.76	419514	11.09	462866	13.30	180204	3.53
Upper Limit [a]	1211448	7.08	1514584	8.26	839028	11.59	925732	13.80	360408	4.03
Lower Limit [b]	302862	6.08	378646	7.26	209757	10.59	231433	12.80	90102	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
MSV1029-BS	564468	6.59	706762	7.76	384886	11.09	423775	13.30	173285	3.53
MSV1029-MB	468505	6.59	627027	7.76	348216	11.09	337826	13.30	158527	3.53
ZZZZZZ	446169	6.59	600590	7.77	335786	11.09	326846	13.30	147976	3.54
MC27745-8	431598	6.59	583326	7.77	329953	11.09	318171	13.30	148834	3.54
ZZZZZZ	428462	6.59	581210	7.77	329142	11.09	318632	13.30	149805	3.54
ZZZZZZ	414949	6.60	558604	7.77	316631	11.09	305478	13.30	145071	3.54
MC27745-1	406377	6.59	557257	7.77	310309	11.09	304354	13.30	152261	3.53
MC27745-2	401109	6.59	549187	7.77	311970	11.09	299911	13.30	155790	3.53
MC27745-3	393741	6.59	535774	7.76	305510	11.09	294098	13.30	152680	3.53
MC27745-4	388659	6.59	530266	7.76	300650	11.09	291627	13.30	146580	3.53
MC27745-5	392234	6.59	528985	7.77	304146	11.09	308199	13.30	157525	3.54
MC27745-6	411592	6.59	553113	7.76	317236	11.09	320141	13.30	163873	3.54
MC27745-7	466570	6.59	577420	7.77	326056	11.09	315868	13.30	180986	3.54
ZZZZZZ	694621	6.59	934560	7.77	516679	11.09	625001	13.30	402772[c]	3.54
ZZZZZZ	756376	6.59	1025515	7.77	544213	11.09	660731	13.30	445898[c]	3.56
ZZZZZZ	614185	6.71	1184622	7.81	468431	11.09	432420	13.30	254280	3.54
ZZZZZZ	630576	6.58	909912	7.76	445841	11.09	432739	13.30	240206	3.53
ZZZZZZ	632396	6.58	907679	7.76	446914	11.09	434700	13.30	240743	3.53
MC27745-1MS	664916	6.58	865058	7.76	460540	11.09	478133	13.30	240896	3.53
MC27745-1MSD	684870	6.58	887114	7.76	474551	11.09	500960	13.30	262194	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.
(c) Outside control limits. Target analytes not associated with this internal standard.

6.4.1

Volatile Surrogate Recovery Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27745-1	V27256.D	110.0	99.0	103.0
MC27745-2	V27257.D	110.0	99.0	104.0
MC27745-3	V27258.D	110.0	99.0	104.0
MC27745-4	V27259.D	110.0	99.0	104.0
MC27745-5	V27260.D	111.0	100.0	104.0
MC27745-6	V27261.D	108.0	99.0	103.0
MC27745-7	V27262.D	98.0	98.0	103.0
MC27745-8	V27253.D	107.0	99.0	104.0
MC27745-1MS	V27271.D	92.0	98.0	101.0
MC27745-1MSD	V27272.D	93.0	98.0	100.0
MSV1029-BS	V27247.D	96.0	99.0	99.0
MSV1029-MB	V27251.D	103.0	98.0	104.0

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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-MB	F71269.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronapbthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-MB	F71269.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	36%	15-110%
4165-62-2	Phenol-d5	26%	15-110%
118-79-6	2,4,6-Tribromophenol	64%	15-110%
4165-60-0	Nitrobenzene-d5	56%	30-130%
321-60-8	2-Fluorobiphenyl	60%	30-130%
1718-51-0	Terphenyl-d14	83%	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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36592-MB	R36652.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	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	84%	30-130%
321-60-8	2-Fluorobiphenyl	66%	30-130%
1718-51-0	Terphenyl-d14	75%	30-130%

Blank Spike Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36592-BS	R36653.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.5	87	40-140
208-96-8	Acenaphthylene	50	34.2	68	40-140
120-12-7	Anthracene	50	44.7	89	40-140
56-55-3	Benzo(a)anthracene	50	56.0	112	40-140
50-32-8	Benzo(a)pyrene	50	41.1	82	40-140
205-99-2	Benzo(b)fluoranthene	50	46.5	93	40-140
191-24-2	Benzo(g,h,i)perylene	50	47.4	95	40-140
207-08-9	Benzo(k)fluoranthene	50	48.1	96	40-140
218-01-9	Chrysene	50	49.1	98	40-140
53-70-3	Dibenzo(a,h)anthracene	50	49.3	99	40-140
206-44-0	Fluoranthene	50	52.4	105	40-140
86-73-7	Fluorene	50	45.7	91	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.8	98	40-140
90-12-0	1-Methylnaphthalene	50	38.5	77	40-140
91-57-6	2-Methylnaphthalene	50	37.3	75	40-140
85-01-8	Phenanthrene	50	46.2	92	40-140
129-00-0	Pyrene	50	52.1	104	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	73%	30-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-BS	F71270.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
OP36591-BSD	F71271.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	10.6	21* a	10.8	22* a	2	30-130/20
95-57-8	2-Chlorophenol	50	35.9	72	31.3	63	14	30-130/20
59-50-7	4-Chloro-3-methyl phenol	50	32.5	65	31.2	62	4	30-130/20
120-83-2	2,4-Dichlorophenol	50	34.6	69	33.5	67	3	30-130/20
105-67-9	2,4-Dimethylphenol	50	28.4	57	26.1	52	8	30-130/20
51-28-5	2,4-Dinitrophenol	50	41.6	83	49.7	99	18	30-130/20
534-52-1	4,6-Dinitro-o-cresol	50	61.6	123	58.9	118	4	30-130/20
95-48-7	2-Methylphenol	50	30.8	62	26.8	54	14	30-130/20
	3&4-Methylphenol	100	57.0	57	50.5	51	12	30-130/20
88-75-5	2-Nitrophenol	50	40.2	80	36.8	74	9	30-130/20
100-02-7	4-Nitrophenol	50	15.2	30	13.6	27* a	11	30-130/20
87-86-5	Pentachlorophenol	50	39.1	78	38.1	76	3	30-130/20
108-95-2	Phenol	50	15.3	31	14.5	29* a	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	50	34.8	70	33.9	68	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	50	36.3	73	33.5	67	8	30-130/20
62-53-3	Aniline	50	23.3	47	22.4	45	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	50	43.3	87	39.7	79	9	40-140/20
85-68-7	Butyl benzyl phthalate	50	50.9	102	47.1	94	8	40-140/20
100-51-6	Benzyl Alcohol	50	40.5	81	36.6	73	10	40-140/20
91-58-7	2-Chloronaphthalene	50	39.8	80	37.1	74	7	40-140/20
106-47-8	4-Chloroaniline	50	34.9	70	33.7	67	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	50	37.1	74	35.2	70	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	50	35.6	71	32.3	65	10	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	50	52.4	105	46.8	94	11	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	50	40.2	80	37.2	74	8	40-140/20
122-66-7	1,2-Diphenylhydrazine	50	36.0	72	33.0	66	9	40-140/20
121-14-2	2,4-Dinitrotoluene	50	46.6	93	44.4	89	5	40-140/20
606-20-2	2,6-Dinitrotoluene	50	44.4	89	41.5	83	7	40-140/20
91-94-1	3,3'-Dichlorobenzidine	50	43.0	86	39.7	79	8	40-140/20
132-64-9	Dibenzofuran	50	39.5	79	37.1	74	6	40-140/20
84-74-2	Di-n-butyl phthalate	50	44.1	88	41.2	82	7	40-140/20
117-84-0	Di-n-octyl phthalate	50	53.2	106	49.8	100	7	40-140/20
84-66-2	Diethyl phthalate	50	40.4	81	38.6	77	5	40-140/20
131-11-3	Dimethyl phthalate	50	34.3	69	35.3	71	3	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	54.3	109	49.5	99	9	40-140/20
118-74-1	Hexachlorobenzene	50	42.1	84	39.6	79	6	40-140/20

* = Outside of Control Limits.

7.3.1

7

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-BS	F71270.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
OP36591-BSD	F71271.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	50	17.0	34* a	16.3	33* a	4	40-140/20
67-72-1	Hexachloroethane	50	23.9	48	21.1	42	12	40-140/20
78-59-1	Isophorone	50	36.4	73	33.8	68	7	40-140/20
88-74-4	2-Nitroaniline	50	43.2	86	41.8	84	3	40-140/20
99-09-2	3-Nitroaniline	50	41.3	83	40.3	81	2	40-140/20
100-01-6	4-Nitroaniline	50	42.0	84	41.4	83	1	40-140/20
98-95-3	Nitrobenzene	50	33.5	67	31.7	63	6	40-140/20
62-75-9	n-Nitrosodimethylamine	50	20.2	40	19.2	38* a	5	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	50	37.9	76	34.5	69	9	40-140/20
86-30-6	N-Nitrosodiphenylamine	50	43.2	86	40.5	81	6	40-140/20
110-86-1	Pyridine	50	18.3	37* a	16.4	33* a	11	40-140/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	38%	37%	15-110%
4165-62-2	Phenol-d5	28%	26%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	75%	15-110%
4165-60-0	Nitrobenzene-d5	59%	55%	30-130%
321-60-8	2-Fluorobiphenyl	65%	60%	30-130%
1718-51-0	Terphenyl-d14	84%	76%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-MS	F71272.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
OP36591-MSD	F71273.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
MC27500-10	F71274.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

7.4.1

7

CAS No.	Compound	MC27500-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	10.6	21* [a]	11.2	22* [a]	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	34.1	68	32.2	64	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	31.6	63	31.9	64	1	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	33.0	66	33.8	68	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	25.7	51	25.3	51	2	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	43.7	87	51.2	102	16	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	62.2	124	62.1	124	0	30-130/20
95-48-7	2-Methylphenol	ND		50	29.1	58	26.9	54	8	30-130/20
	3&4-Methylphenol	ND		100	56.3	56	52.1	52	8	30-130/20
88-75-5	2-Nitrophenol	ND		50	38.3	77	38.6	77	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	13.9	28* [b]	13.8	28* [b]	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	38.8	78	39.1	78	1	30-130/20
108-95-2	Phenol	ND		50	15.0	30	14.5	29* [b]	3	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	33.4	67	34.3	69	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	33.7	67	34.3	69	2	30-130/20
62-53-3	Aniline	ND		50	22.3	45	21.9	44	2	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	39.4	79	39.2	78	1	40-140/20
85-68-7	Butyl henzyl phthalate	ND		50	47.1	94	46.8	94	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	37.7	75	37.5	75	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	37.0	74	36.3	73	2	40-140/20
106-47-8	4-Chloroaniline	ND		50	32.5	65	33.7	67	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	34.9	70	34.6	69	1	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	33.7	67	32.0	64	5	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	48.3	97	46.7	93	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	36.2	72	36.2	72	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	33.2	66	32.5	65	2	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	43.9	88	43.2	86	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.5	83	40.7	81	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	37.5	75	39.0	78	4	40-140/20
132-64-9	Dibenzofuran	ND		50	37.1	74	36.3	73	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	42.4	85	39.6	79	7	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	49.6	99	47.6	95	4	40-140/20
84-66-2	Diethyl phthalate	ND		50	37.7	75	36.9	74	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	32.8	66	32.1	64	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phtbalate	1.1	J	50	49.0	96	48.3	94	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	39.4	79	38.3	77	3	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36591-MS	F71272.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
OP36591-MSD	F71273.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176
MC27500-10	F71274.D	1	01/21/14	KR	01/20/14	OP36591	MSF3176

The QC reported here applies to the following samples: Method: SW846 8270D

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	MC27500-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	15.7	31* [b]	15.7	31* [b]	0	40-140/20
67-72-1	Hexachloroethane	ND		50	22.5	45	22.0	44	2	40-140/20
78-59-1	Isophorone	ND		50	34.1	68	33.7	67	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.2	84	41.6	83	1	40-140/20
99-09-2	3-Nitroaniline	ND		50	37.9	76	37.4	75	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	38.5	77	38.9	78	1	40-140/20
98-95-3	Nitrobenzene	ND		50	31.6	63	31.6	63	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	19.8	40	19.3	39* [a]	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	35.2	70	34.0	68	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	40.1	80	39.2	78	2	40-140/20
110-86-1	Pyridine	ND		50	16.6	33* [b]	16.2	32* [b]	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-10	Limits
367-12-4	2-Fluorophenol	35%	35%	35%	15-110%
4165-62-2	Phenol-d5	26%	26%	24%	15-110%
118-79-6	2,4,6-Tribromophenol	74%	77%	64%	15-110%
4165-60-0	Nitrobenzene-d5	54%	55%	51%	30-130%
321-60-8	2-Fluorobiphenyl	59%	58%	59%	30-130%
1718-51-0	Terphenyl-d14	75%	76%	79%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36592-MS	R36655.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
OP36592-MSD	R36656.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350
MC27500-12	R36657.D	1	01/22/14	KR	01/20/14	OP36592	MSR1350

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7

CAS No.	Compound	MC27500-12 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.0	80	39.5	79	1	40-140/20
208-96-8	Acenaphthylene	ND		50	31.3	63	30.9	62	1	40-140/20
120-12-7	Anthracene	ND		50	41.4	83	40.6	81	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	51.2	102	50.2	100	2	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	38.6	77	37.4	75	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	44.6	89	41.9	84	6	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	44.4	89	43.3	87	3	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	44.5	89	41.8	84	6	40-140/20
218-01-9	Chrysene	ND		50	45.2	90	44.0	88	3	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	46.3	93	44.9	90	3	40-140/20
206-44-0	Fluoranthene	ND		50	47.8	96	46.7	93	2	40-140/20
86-73-7	Fluorene	ND		50	42.0	84	41.8	84	0	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	45.7	91	44.3	89	3	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	35.4	71	34.7	69	2	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	34.2	68	33.5	67	2	40-140/20
85-01-8	Phenanthrene	0.026	J	50	42.9	86	42.0	84	2	40-140/20
129-00-0	Pyrene	ND		50	47.7	95	46.7	93	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-12	Limits
4165-60-0	Nitrobenzene-d5	78%	77%	75%	30-130%
321-60-8	2-Fluorobiphenyl	62%	63%	61%	30-130%
1718-51-0	Terphenyl-d14	67%	67%	70%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSF3176-CC3146	Injection Date:	01/21/14
Lab File ID:	F71258.D	Injection Time:	11:29
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	134343	4.08	508164	5.13	313472	6.65	543584	7.93	625075	10.49	593512	12.18
Upper Limit [a]	268686	4.58	1016328	5.63	626944	7.15	1087168	8.43	1250150	10.99	1187024	12.68
Lower Limit [b]	67172	3.58	254082	4.63	156736	6.15	271792	7.43	312538	9.99	296756	11.68

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
OP36593-MB	116263	4.07	434484	5.12	261652	6.64	459513	7.93	505787	10.49	468578	12.18
OP36593-BS	122491	4.07	454915	5.13	271804	6.65	471315	7.93	536523	10.48	510591	12.18
OP36593-MS	129516	4.08	470461	5.13	288482	6.65	493460	7.93	548411	10.49	513247	12.18
OP36593-MSD	121115	4.07	444375	5.12	273974	6.65	478583	7.93	545613	10.49	524019	12.18
MC27515-1	107713	4.07	412586	5.12	250236	6.65	453904	7.93	503300	10.48	480565	12.18
ZZZZZZ	101322	4.07	389676	5.12	243069	6.64	448338	7.93	523405	10.49	506143	12.18
ZZZZZZ	131816	4.07	509296	5.12	317993	6.65	581516	7.93	675063	10.48	655354	12.18
ZZZZZZ	107509	4.07	398769	5.13	248047	6.65	443508	7.93	488925	10.48	462930	12.18
ZZZZZZ	82645	4.07	327178	5.13	204958	6.65	377786	7.93	436377	10.48	429013	12.18
ZZZZZZ	88956	4.07	348933	5.12	221942	6.65	407590	7.93	471353	10.48	448357	12.18
OP36604-MB	84419	4.07	331457	5.13	208956	6.65	384239	7.93	442396	10.48	423318	12.18
OP36591-MB	84419	4.07	331457	5.13	208956	6.65	384239	7.93	442396	10.48	423318	12.18
OP36591-BS	98478	4.07	375628	5.13	233437	6.65	408775	7.93	473511	10.48	452303	12.18
OP36604-BS	98478	4.07	375628	5.13	233437	6.65	408775	7.93	473511	10.48	452303	12.18
OP36591-BSD	115754	4.08	429834	5.13	264533	6.65	470914	7.93	540759	10.49	508844	12.18
OP36604-BSD	115754	4.08	429834	5.13	264533	6.65	470914	7.93	540759	10.49	508844	12.18
OP36591-MS	101040	4.07	392212	5.13	242515	6.65	428938	7.93	507179	10.49	475625	12.18
OP36591-MSD	126858	4.07	470562	5.12	293740	6.65	522616	7.93	582107	10.49	559831	12.18
MC27500-10	121793	4.07	465911	5.13	277333	6.65	501569	7.93	552400	10.48	525941	12.18
ZZZZZZ	115629	4.07	441451	5.13	275074	6.65	511447	7.93	596455	10.49	592216	12.18
ZZZZZZ	110314	4.07	421463	5.13	256509	6.65	460794	7.93	512973	10.48	494434	12.18
ZZZZZZ	106911	4.07	415565	5.13	251128	6.65	444529	7.93	508396	10.48	501063	12.18
MC27745-1	101013	4.07	384298	5.13	237630	6.65	435218	7.93	488601	10.48	473470	12.18
MC27745-2	115128	4.07	438450	5.13	270241	6.65	492356	7.93	567034	10.49	551584	12.18
MC27745-3	109165	4.07	422219	5.12	264533	6.65	464957	7.93	551039	10.48	535135	12.18
MC27745-4	118212	4.07	470643	5.13	296186	6.65	536500	7.93	611489	10.48	596223	12.18
MC27745-5	106288	4.07	401273	5.12	252679	6.65	436510	7.93	530516	10.49	530396	12.18
MC27745-6	123180	4.07	468129	5.13	289213	6.65	507603	7.93	599413	10.49	604256	12.18
MC27745-7	138882	4.07	529267	5.13	334569	6.65	591132	7.93	697980	10.48	678355	12.18
ZZZZZZ	108388	4.07	438499	5.13	254693	6.65	514048	7.93	580211	10.49	583220	12.18
ZZZZZZ	102050	4.07	404982	5.13	233438	6.65	451573	7.93	525308	10.48	522216	12.18
ZZZZZZ	113227	4.07	446720	5.12	256435	6.65	494887	7.93	583150	10.49	577219	12.18
ZZZZZZ	119245	4.07	461247	5.13	269648	6.65	520945	7.93	620267	10.48	620275	12.18

IS 1 = 1,4-Dichlorobenzene-d4

Semivolatile Internal Standard Area Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSF3176-CC3146	Injection Date:	01/21/14
Lab File ID:	F71258.D	Injection Time:	11:29
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

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.

7.5.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1350-CC1261	Injection Date:	01/22/14
Lab File ID:	R36651.D	Injection Time:	09:47
Instrument ID:	GCMSR	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	596831	4.35	1941097	5.41	1097421	6.95	1781798	8.37	1311798	11.14	2401330	12.65
Upper Limit [a]	1193662	4.85	3882194	5.91	2194842	7.45	3563596	8.87	2623596	11.64	4802660	13.15
Lower Limit [b]	298416	3.85	970549	4.91	548711	6.45	890899	7.87	655899	10.64	1200665	12.15

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
OP36592-MB	615044	4.35	1959176	5.41	1125749	6.95	1836240	8.37	1350779	11.14	2446458	12.65
OP36592-BS	642624	4.35	2046983	5.41	1164256	6.95	1875022	8.37	1405916	11.15	2521712	12.65
OP36592-MS	637277	4.35	2052168	5.41	1183988	6.95	1912941	8.37	1465368	11.15	2556589	12.65
OP36592-MSD	653852	4.35	2099288	5.41	1204948	6.95	1953088	8.37	1495307	11.15	2602685	12.65
MC27500-12	620922	4.35	1993295	5.41	1154336	6.95	1889604	8.37	1396963	11.14	2540951	12.65
ZZZZZZ	486750	4.35	1555293	5.41	887470	6.95	1438165	8.37	1088363	11.14	2019905	12.65
ZZZZZZ	522851	4.35	1673519	5.41	957130	6.95	1555562	8.37	1153292	11.14	2107090	12.65
MC27745-1	588316	4.35	1901295	5.41	1101406	6.95	1804294	8.37	1338597	11.14	2440303	12.65
MC27745-2	617157	4.35	1983211	5.41	1143727	6.95	1852328	8.37	1363522	11.14	2477869	12.65
MC27745-3	651147	4.35	2079956	5.41	1199348	6.95	1953156	8.37	1427107	11.14	2594244	12.65
MC27745-4	644432	4.35	2062434	5.41	1199388	6.95	1966841	8.37	1481101	11.14	2731013	12.65
MC27745-5	606493	4.35	1955197	5.41	1144416	6.95	1959635	8.38	1488301	11.15	2703081	12.66
MC27745-6	653097	4.35	2073014	5.41	1205369	6.95	2021345	8.37	1520727	11.15	2805308	12.66
MC27745-7	646221	4.35	2063945	5.41	1195089	6.95	1959093	8.37	1468729	11.14	2698174	12.65
ZZZZZZ	501797	4.35	1595864	5.41	913939	6.95	1481891	8.37	1109901	11.14	2056369	12.65
ZZZZZZ	451770	4.35	1445504	5.41	825572	6.95	1346617	8.37	1050051	11.14	1946914	12.65
ZZZZZZ	488148	4.35	1570834	5.41	900646	6.95	1467259	8.37	1125851	11.14	2061209	12.65
ZZZZZZ	514031	4.35	1633937	5.41	932568	6.95	1510923	8.37	1168355	11.14	2128612	12.65

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.

7.5.2

7

Semivolatile Internal Standard Area Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW766-CC729	Injection Date:	01/29/14
Lab File ID:	W17427.D	Injection Time:	07:28
Instrument ID:	GCMSW	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	58298	4.47	220682	5.54	150861	7.08	259343	8.38	266543	11.08	243310	12.86
Upper Limit [a]	116596	4.97	441364	6.04	301722	7.58	518686	8.88	533086	11.58	486620	13.36
Lower Limit [b]	29149	3.97	110341	5.04	75431	6.58	129672	7.88	133272	10.58	121655	12.36
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
OP36652-MB	60792	4.47	225349	5.53	151942	7.08	253325	8.37	253917	11.08	236094	12.85
OP36652-BS	60215	4.47	220576	5.54	147686	7.08	256663	8.37	250177	11.08	228918	12.85
OP36652-MS	58080	4.47	212484	5.54	140662	7.08	244104	8.37	239065	11.08	218464	12.85
OP36652-MSD	62695	4.47	232127	5.54	155212	7.08	262624	8.37	261207	11.08	241944	12.85
MC27500-23	63224	4.47	238070	5.54	158607	7.08	273509	8.37	268697	11.08	253727	12.85
OP36688-MB	67588	4.47	250359	5.53	167692	7.08	279360	8.37	266344	11.08	240893	12.85
OP36688-BS	71174	4.47	264933	5.54	174277	7.08	287753	8.38	272508	11.08	247611	12.85
ZZZZZZ	64927	4.47	235983	5.53	151710	7.08	253360	8.37	228584	11.08	201993	12.85
ZZZZZZ	58374	4.47	215792	5.53	143816	7.08	238029	8.37	240010	11.08	225891	12.85
MC27745-7 [c]	62062	4.47	228203	5.53	148291	7.08	248497	8.37	244505	11.08	232108	12.85
OP36679-MB	62128	4.47	229071	5.53	152600	7.08	259121	8.37	254909	11.08	241274	12.85
OP36679-BS	63196	4.47	233406	5.54	156001	7.08	263963	8.37	255257	11.08	242735	12.85
ZZZZZZ	65602	4.47	242036	5.53	161933	7.08	272438	8.37	267153	11.08	255143	12.85
ZZZZZZ	66056	4.47	244694	5.53	163229	7.08	270676	8.37	265338	11.08	249514	12.85
ZZZZZZ	62028	4.47	234468	5.53	154033	7.08	260005	8.37	267622	11.08	247047	12.85
OP36666-MB	59445	4.47	220292	5.53	144019	7.08	243236	8.37	237610	11.08	223925	12.85
OP36666-BS	61534	4.47	221397	5.54	146713	7.08	246662	8.37	244089	11.08	228575	12.85
OP36666-BSD	63939	4.47	233986	5.54	152659	7.08	263868	8.37	255904	11.08	240028	12.85
ZZZZZZ	62056	4.47	225175	5.53	147479	7.08	246231	8.37	247144	11.07	233285	12.85

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) Confirmation run.

Semivolatile Surrogate Recovery Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27745-1	F71279.D	32.0	23.0	63.0	55.0	60.0	67.0
MC27745-2	F71280.D	33.0	23.0	68.0	49.0	58.0	61.0
MC27745-3	F71281.D	27.0	21.0	74.0	50.0	57.0	77.0
MC27745-4	F71282.D	25.0	18.0	50.0	36.0	41.0	74.0
MC27745-5	F71283.D	38.0	31.0	84.0	52.0	59.0	72.0
MC27745-6	F71284.D	38.0	30.0	79.0	50.0	57.0	70.0
MC27745-7	W17437.D	2.0* [a]	1.0* [a]	21.0	70.0	75.0	95.0
MC27745-7	F71285.D	1.0* [a]	2.0* [a]	20.0	44.0	50.0	66.0
OP36591-BS	F71270.D	38.0	28.0	82.0	59.0	65.0	84.0
OP36591-BSD	F71271.D	37.0	26.0	75.0	55.0	60.0	76.0
OP36591-MB	F71269.D	36.0	26.0	64.0	56.0	60.0	83.0
OP36591-MS	F71272.D	35.0	26.0	74.0	54.0	59.0	75.0
OP36591-MSD	F71273.D	35.0	26.0	77.0	55.0	58.0	76.0

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 re-extraction/reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27745-1	R36660.D	81.0	64.0	60.0
MC27745-2	R36661.D	76.0	60.0	56.0
MC27745-3	R36662.D	75.0	61.0	72.0
MC27745-4	R36663.D	54.0	43.0	67.0
MC27745-5	R36664.D	77.0	62.0	67.0
MC27745-6	R36665.D	74.0	60.0	64.0
MC27745-7	R36666.D	65.0	53.0	59.0
OP36592-BS	R36653.D	86.0	70.0	73.0
OP36592-MB	R36652.D	84.0	66.0	75.0
OP36592-MS	R36655.D	78.0	62.0	67.0
OP36592-MSD	R36656.D	77.0	63.0	67.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-MB	YZ87631.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-9

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	123%	36-173%
460-00-4	Bromofluorobenzene (S)	107%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-BS	YZ87632.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.092	130	60-140
106-93-4	1,2-Dibromoethane	0.071	0.078	110	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	102%	36-173%

8.2.1 B

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-MS	YZ87633.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
OP36605-MSD	YZ87634.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
MC27500-13	YZ87635.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27745-1, MC27745-2, MC27745-3, MC27745-4, MC27745-5, MC27745-6, MC27745-7, MC27745-9

CAS No.	Compound	MC27500-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.091	128	0.080	113	13	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.078	110	0.071	100	9	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-13 Limits	
460-00-4	Bromofluorobenzene (S)	124%	98%	110%	36-173%
460-00-4	Bromofluorobenzene (S)	117%	90%	101%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27745-1	YZ87638.D	111.0	96.0
MC27745-2	YZ87639.D	95.0	74.0
MC27745-3	YZ87640.D	98.0	82.0
MC27745-4	YZ87642.D	121.0	107.0
MC27745-5	YZ87643.D	120.0	85.0
MC27745-6	YZ87644.D	111.0	86.0
MC27745-7	YZ87645.D	108.0	95.0
MC27745-9	YZ87646.D	84.0	73.0
OP36605-BS	YZ87632.D	127.0	102.0
OP36605-MB	YZ87631.D	123.0	107.0
OP36605-MS	YZ87633.D	124.0	117.0
OP36605-MSD	YZ87634.D	98.0	90.0

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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7475-ICC7475	Injection Date:	01/21/14
Lab File ID:	YZ87626.D	Injection Time:	18:08
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.59	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ87629A.D	01/21/14	19:23	3.61	3.46
OP36605-MB	YZ87631.D	01/21/14	20:13	3.59	3.46
OP36605-BS	YZ87632.D	01/21/14	20:38	3.59	3.47
OP36605-MS	YZ87633.D	01/21/14	21:04	3.59	3.45
OP36605-MSD	YZ87634.D	01/21/14	21:29	3.59	3.46
MC27500-13	YZ87635.D	01/21/14	21:54	3.59	3.46
ZZZZZZ	YZ87636.D	01/21/14	22:19	3.59	3.45
ZZZZZZ	YZ87637.D	01/21/14	22:44	3.59	3.46
MC27745-1	YZ87638.D	01/21/14	23:10	3.59	3.46
MC27745-2	YZ87639.D	01/21/14	23:35	3.59	3.47
MC27745-3	YZ87640.D	01/22/14	00:00	3.59	3.47

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: MC27745
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7475-CC7475	Injection Date:	01/22/14
Lab File ID:	YZ87641.D	Injection Time:	00:26
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.59	3.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC27745-4	YZ87642.D	01/22/14	00:51	3.59	3.47
MC27745-5	YZ87643.D	01/22/14	01:16	3.59	3.46
MC27745-6	YZ87644.D	01/22/14	01:42	3.59	3.46
MC27745-7	YZ87645.D	01/22/14	02:07	3.59	3.46
MC27745-9	YZ87646.D	01/22/14	02:32	3.59	3.46
ZZZZZZ	YZ87647.D	01/22/14	02:58	3.59	3.47
ZZZZZZ	YZ87648.D	01/22/14	03:23	3.59	3.45
ZZZZZZ	YZ87649.D	01/22/14	03:48	3.59	3.44
ZZZZZZ	YZ87650.D	01/22/14	04:14	3.59	3.47
GYZ7475-ECC7475	YZ87651.D	01/22/14	04:39	3.59	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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC27773

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/25/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
ROST4PZC-ROX-011714	ROST3MW-ROX-011714
MW5-ROX-011714	TB-ROX-011714-HCL
TB-ROX-011714-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 samples ROST4PZC-ROX-011714 and ROST3MW-ROX-011714 were re-extracted outside of extraction holding time criteria. VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC acid-fraction surrogate recoveries were outside evaluation criteria in samples ROST4PZC-ROX-011714 and ROST3MW-ROX-011714. ROST3MW-ROX-011714, associated with very low acid-fraction surrogate recoveries, was re-sampled February 13, 2014 with reproducibly low acid-fraction surrogate recoveries). These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein, 2-chloroethyl vinyl ether, aniline, and bis(2-chloroisopropyl)ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 1.6ºC, 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?

No, samples ROST4PZC-ROX-011714 and ROST3MW-ROX-011714 were re-extracted 5 days outside of extraction holding time criteria (7 days) due to low recoveries of acid fraction surrogates in the original analysis. The re-extracted/re-analysis confirmation run indicates matrix interference. Holding time exceedances were not greater than two times (2X) holding time criteria.

Analytical data associated with extraction holding times outside criteria were reported from the original analysis run in sample ROST3MW-ROX-011714; no qualification of

data was required based on holding time criteria in sample ROST3MW-ROX-011714. Data requiring qualification is summarized in the following table.

Sample ID	Parameter	Analyte	Qualification
ROST4PZC-ROX-011714	SVOCs	Benzoic acid	**UJ**
ROST4PZC-ROX-011714	SVOCs	2-Chlorophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	4-Chloro-3-methyl phenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2,4-Dichlorophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2,4-Dimethylphenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2,4-Dinitrophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	4,6-Dinitro-o-cresol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2-Methylphenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	3&4-Methylphenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2-Nitrophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	4-Nitrophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	Pentachlorophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	Phenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2,4,5-Trichlorophenol	**UJ**
ROST4PZC-ROX-011714	SVOCs	2,4,6-Trichlorophenol	**UJ**

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
MSV1028-BS	VOCs	Acrolein	**159**	70-130
MSV1028-BS	VOCs	2-Chloroethyl vinyl ether	**430**	70-130
OP36620-BS	SVOCs	4-Nitrophenol	**27**	30-130
OP36620-BS	SVOCs	bis(2-Chloroisopropyl)ether	**189**	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. MSV1028-BS was associated with the trip blank. Trip blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
ROST3MW-ROX-011714	SVOCs	4-Nitrophenol	**UJ**
MW5-ROX-011714	SVOCs	4-Nitrophenol	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
ROST4PZC-ROX-011714-Run#1	SVOCs	2-Fluorophenol	**5**	15-110
ROST4PZC-ROX-011714-Run#1	SVOCs	Phenol-d_5	**8**	15-110
ROST3MW-ROX-011714-Run#1	SVOCs	2-Fluorophenol	**2**	15-110
ROST3MW-ROX-011714-Run#1	SVOCs	Phenol-d_5	**2**	15-110
ROST3MW-ROX-011714-Run#1	SVOCs	2,4,6-Tribromophenol	**10**	15-110
ROST3MW-ROX-011714-Run#2	SVOCs	2-Fluorophenol	**9**	15-110
ROST3MW-ROX-011714-Run#2	SVOCs	Phenol-d_5	**1**	15-110
ROST3MW-ROX-011714-Run#2	SVOCs	2,4,6-Tribromophenol	**4**	15-110

Analytical data that required qualification based on surrogate data are included in the table below. Sample ROST3MW-ROX-011714 was resampled on February 13, 2014. The associated acid-fraction surrogate recoveries (SDG 28321) were reproducibly low for the re-sample, indicating possible matrix interference. Analytes associated with surrogate recovery outside evaluation criteria in ROST4PZC-ROX-011714-Run#1 were reported from Run#2.

Sample ID	Parameter	Analyte	Qualification
ROST3MW-ROX-011714	SVOCs	Benzoic acid	**UJ**
ROST3MW-ROX-011714	SVOCs	2-Chlorophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	4-Chloro-3-methyl phenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2,4-Dichlorophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2,4-Dimethylphenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2,4-Dinitrophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	4,6-Dinitro-o-cresol	**UJ**
ROST3MW-ROX-011714	SVOCs	2-Methylphenol	**UJ**
ROST3MW-ROX-011714	SVOCs	3&4-Methylphenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2-Nitrophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	4-Nitrophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	Pentachlorophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	Phenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2,4,5-Trichlorophenol	**UJ**
ROST3MW-ROX-011714	SVOCs	2,4,6-Trichlorophenol	**UJ**

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

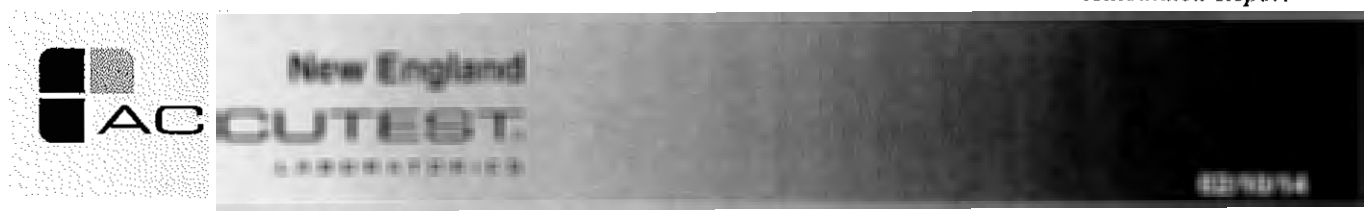
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27773

Sampling Date: 01/17/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **76**

Reviewed on 2/25/2014

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 (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: MC27773

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27773-1	01/17/14	09:55	01/20/14	AQ	Ground Water	ROST4PZC-ROX-011714
MC27773-2	01/17/14	12:35	01/20/14	AQ	Ground Water	ROST3MW-ROX-011714
MC27773-3	01/17/14	15:40	01/20/14	AQ	Ground Water	MW5-ROX-011714
MC27773-4	01/17/14	00:00	01/20/14	AQ	Trip Blank Water	TB-ROX-011714-HCL
MC27773-5	01/17/14	00:00	01/20/14	AQ	Trip Blank Water	TB-ROX-011714-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27773
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/3/2014 5:01:10 PM

3 Sample(s) and 2 Trip Blank(s) were collected on 01/17/2014 and were received at Accutest on 01/20/2014 properly preserved, at 1.6 Deg. C and intact. These Samples received an Accutest job number of MC27773. 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:** MSV1028

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27705-3MS, MC27705-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acetone, Acrolein 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, 1,2,4-Trichlorobenzene, 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration standard MSV1028-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36620

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-15MS, MC27500-15MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP36620-BS/MSD Recovery(s) for 4-Nitrophenol are outside control limits. Blank Spike meets program technical requirements.
- OP36620-MS/MSD for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference.
- OP36620-BS/MS/MSD for bis(2-Chloroisopropyl)ether: Outside control limits. Associated samples are non-detect for this compound.
- MC27773-1 for 2-Fluorophenol, Phenol-d5: Outside control limits. Sample re-extracted/reanalyzed.
- Initial calibration verification MSW729-ICV729 for Aniline, bis(2-chloroisopropyl)ether exceed 30% Difference. These compounds are within criteria in continuing calibration check MSW765-CC729.
- MC27773-2 for 2-Fluorophenol, 2,4,6-Tribromophenol, Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Matrix AQ	Batch ID: OP36696

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP36696-MS1 Recovery(s) for Benzoic Acid are outside control limits. Outside control limits due to possible matrix interferenee. Refer to Blank Spike.
- RPD(s) of OP36696-MSD1 for 2,4-Dinitrophenol, Benzoic Acid are outside control limits for sample OP36696-MSD1. High RPD due to possible matrix interferenee and/or sample non-homogeneity.
- MC27773-2: Confirmation run.
- MC27773-1, 2: Sample re-extracted beyond recommended holding time.
- MC27773-2 for 2-Fluorophenol, 2,4,6-Tribromophenol, Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36621

- 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) MC27500-16MS, MC27500-16MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP36605

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-13MS, MC27500-13MSD 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(MC27773).

Summary of Hits

Job Number: MC27773
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/17/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27773-1	ROST4PZC-ROX-011714					
Benzene		1.5	0.50	0.45	ug/l	SW846 8260C
Ethylbenzene		3.9	1.0	0.38	ug/l	SW846 8260C
n-Propylbenzene		0.73 J	5.0	0.59	ug/l	SW846 8260C
Toluene		1.4	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1.7 J	5.0	0.47	ug/l	SW846 8260C
m,p-Xylene		12.4	1.0	0.70	ug/l	SW846 8260C
o-Xylene		5.7	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		18.0	1.0	0.41	ug/l	SW846 8260C
1-Methylnaphthalene		0.19 J	0.24	0.059	ug/l	SW846 8270D BY SIM
Phenanthrene		0.077	0.059	0.015	ug/l	SW846 8270D BY SIM
MC27773-2	ROST3MW-ROX-011714					
Benzene		4.0	0.50	0.45	ug/l	SW846 8260C
n-Butylbenzene		1.2 J	5.0	0.54	ug/l	SW846 8260C
Ethylbenzene		8.0	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		0.99 J	5.0	0.64	ug/l	SW846 8260C
n-Propylbenzene		2.0 J	5.0	0.59	ug/l	SW846 8260C
Toluene		1.2	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		20.7	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		5.7	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		37.7	1.0	0.70	ug/l	SW846 8260C
o-Xylene		6.3	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		44.0	1.0	0.41	ug/l	SW846 8260C
1-Methylnaphthalene		1.1	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.99	0.21	0.079	ug/l	SW846 8270D BY SIM
Phenanthrene		0.20	0.053	0.013	ug/l	SW846 8270D BY SIM
MC27773-3	MW5-ROX-011714					
Benzene		2.0	0.50	0.45	ug/l	SW846 8260C
sec-Butylbenzene		2.0 J	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		6.4	5.0	0.87	ug/l	SW846 8260C
Isopropylbenzene		0.97 J	5.0	0.64	ug/l	SW846 8260C
Methyl Tert Butyl Ether		28.2	1.0	0.43	ug/l	SW846 8260C
Toluene		1.4	1.0	0.46	ug/l	SW846 8260C
m,p-Xylene		8.1	1.0	0.70	ug/l	SW846 8260C
o-Xylene		4.5	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		12.7	1.0	0.41	ug/l	SW846 8260C
1-Methylnaphthalene		3.5	0.21	0.053	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC27773
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/17/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

MC27773-4 TB-ROX-011714-HCL

No hits reported in this sample.

MC27773-5 TB-ROX-011714-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	ROST4PZC-ROX-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27236.D	1	01/21/14	AMY	n/a	n/a	MSV1028
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1.5	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3.9	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	0.73	5.0	0.59	ng/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.4	1.0	0.46	ng/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorohenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1.7	5.0	0.47	ug/l	J
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	12.4	1.0	0.70	ug/l	
95-47-6	o-Xylene	5.7	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	18.0	1.0	0.41	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-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		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
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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-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17411.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
Run #2 [a]	W17520.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2	1000 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND [b]	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND [b]	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [b]	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND [b]	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND [b]	10	1.1	ug/l	
51-28-5	2,4-Diuitrophenol	ND [b]	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [b]	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND [b]	10	1.3	ug/l	
	3&4-Methylphenol	ND [b]	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND [b]	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND [b]	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND [b]	10	1.3	ug/l	
108-95-2	Phenol	ND [b]	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [b]	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [b]	10	0.32	ug/l	
62-53-3	Aniline	ND	12	0.75	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.9	0.24	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.9	1.0	ug/l	
100-51-6	Benzyl Alcohol	ND	12	0.68	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.9	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.9	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.9	0.27	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.9	0.16	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.9	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.9	0.77	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.79	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.75	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.9	0.59	ug/l	
132-64-9	Dibenzofuran	ND	2.4	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.9	0.46	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.9	0.51	ug/l	

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Report of Analysis

Client Sample ID:	ROST4PZC-ROX-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Ceutral Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.9	0.59	ug/l	
131-11-3	Dimethyl phthalate	ND	5.9	0.59	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.4	0.57	ug/l	
118-74-1	Hexachlorobenzene	ND	5.9	0.35	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	2.9	ug/l	
67-72-1	Hexachloroethane	ND	5.9	0.52	ug/l	
78-59-1	Isophorone	ND	5.9	0.24	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.33	ug/l	
99-09-2	3-Nitroaniline	ND	12	0.59	ug/l	
100-01-6	4-Nitroaniline	ND	12	5.1	ug/l	
98-95-3	Nitrobenzene	ND	5.9	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.9	0.59	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.9	0.95	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.9	0.64	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	5% c	39%	15-110%
4165-62-2	Phenol-d5	8% c	34%	15-110%
118-79-6	2,4,6-Tribromophenol	43%	82%	15-110%
4165-60-0	Nitrobenzene-d5	67%	75%	30-130%
321-60-8	2-Fluorobiphenyl	67%	75%	30-130%
1718-51-0	Terphenyl-d14	85%	89%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	
	Total TIC, Semi-Volatile		0	ug/l	

(a) Sample re-extracted beyond recommended holding time.
(b) Result is from Run# 2
(c) Outside control limits. Sample re-extracted/reanalyzed.

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RL = Reporting Limit
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J = Indicates an estimated value
B = Indicates analyte found in associated method blank
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Report of Analysis

Client Sample ID:	ROST4PZC-ROX-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87108.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239
Run #2							

	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

BN PAH 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	ng/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	ng/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.12	0.036	ug/l	
90-12-0	1-Methylnaphthalene	0.19	0.24	0.059	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.24	0.087	ug/l	
85-01-8	Phenanthrene	0.077	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	74%		30-130%
321-60-8	2-Fluorobiphenyl	62%		30-130%
1718-51-0	Terphenyl-d14	75%		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:	ROST4PZC-ROX-011714		
Lab Sample ID:	MC27773-1	Date Sampled:	01/17/14
Matrix:	AQ - Gronnd Water	Date Received:	01/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana IQI4 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87647.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		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:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27237.D	1	01/21/14	AMY	n/a	n/a	MSV1028
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	4.0	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	1.2	5.0	0.54	ug/l	J
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	8.0	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	0.99	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	2.0	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.2	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	20.7	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	5.7	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	37.7	1.0	0.70	ug/l	
95-47-6	o-Xylene	6.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	44.0	1.0	0.41	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:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17412.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
Run #2 [a]	W17521.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2	950 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ng/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	2% [b]	9% [b]	15-110%
4165-62-2	Phenol-d5	2% [b]	1% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	10% [b]	4% [b]	15-110%
4165-60-0	Nitrobenzene-d5	61%	73%	30-130%
321-60-8	2-Fluorobiphenyl	61%	70%	30-130%
1718-51-0	Terphenyl-d14	88%	93%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87109.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239
Run #2							

	Initial Volume	Final Volume
Run #I	940 ml	1.0 ml
Run #2		

BN PAH 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	1.1	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	0.99	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.20	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	65%		30-130%
321-60-8	2-Fluorobiphenyl	56%		30-130%
1718-51-0	Terphenyl-d14	79%		30-130%

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ROST3MW-ROX-011714		
Lab Sample ID:	MC27773-2	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87648.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	112%		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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27238.D	1	01/21/14	AMY	n/a	n/a	MSV1028
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-I	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	2.0	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	2.0	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	6.4	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	0.97	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	28.2	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.4	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	8.1	1.0	0.70	ug/l	
95-47-6	o-Xylene	4.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	12.7	1.0	0.41	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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		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
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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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17413.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	UJ
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	ug/l	

ND = Not detected MDL - Method Detection Limit
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Report of Analysis

Client Sample ID:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ng/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	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	36%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	61%		30-130%
321-60-8	2-Fluorobiphenyl	61%		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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87110.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

BN PAH 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	3.5	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	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	66%		30-130%
321-60-8	2-Fluorobiphenyl	58%		30-130%
1718-51-0	Terphenyl-d14	78%		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:	MW5-ROX-011714		
Lab Sample ID:	MC27773-3	Date Sampled:	01/17/14
Matrix:	AQ - Ground Water	Date Received:	01/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87649.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	165%		36-173%
460-00-4	Bromofluorobenzene (S)	130%		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-011714-HCL		
Lab Sample ID:	MC27773-4	Date Sampled:	01/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27221.D	1	01/21/14	AMY	n/a	n/a	MSV1028
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-011714-HCL		
Lab Sample ID:	MC27773-4	Date Sampled:	01/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroetbane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Viuyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-011714-HCL		
Lab Sample ID:	MC27773-4	Date Sampled:	01/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/20/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	98%		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	

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-011714-ST		
Lab Sample ID:	MC27773-5	Date Sampled:	01/17/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/20/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87650.D	1	01/22/14	CZ	01/20/14	OP36605	GYZ7475
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

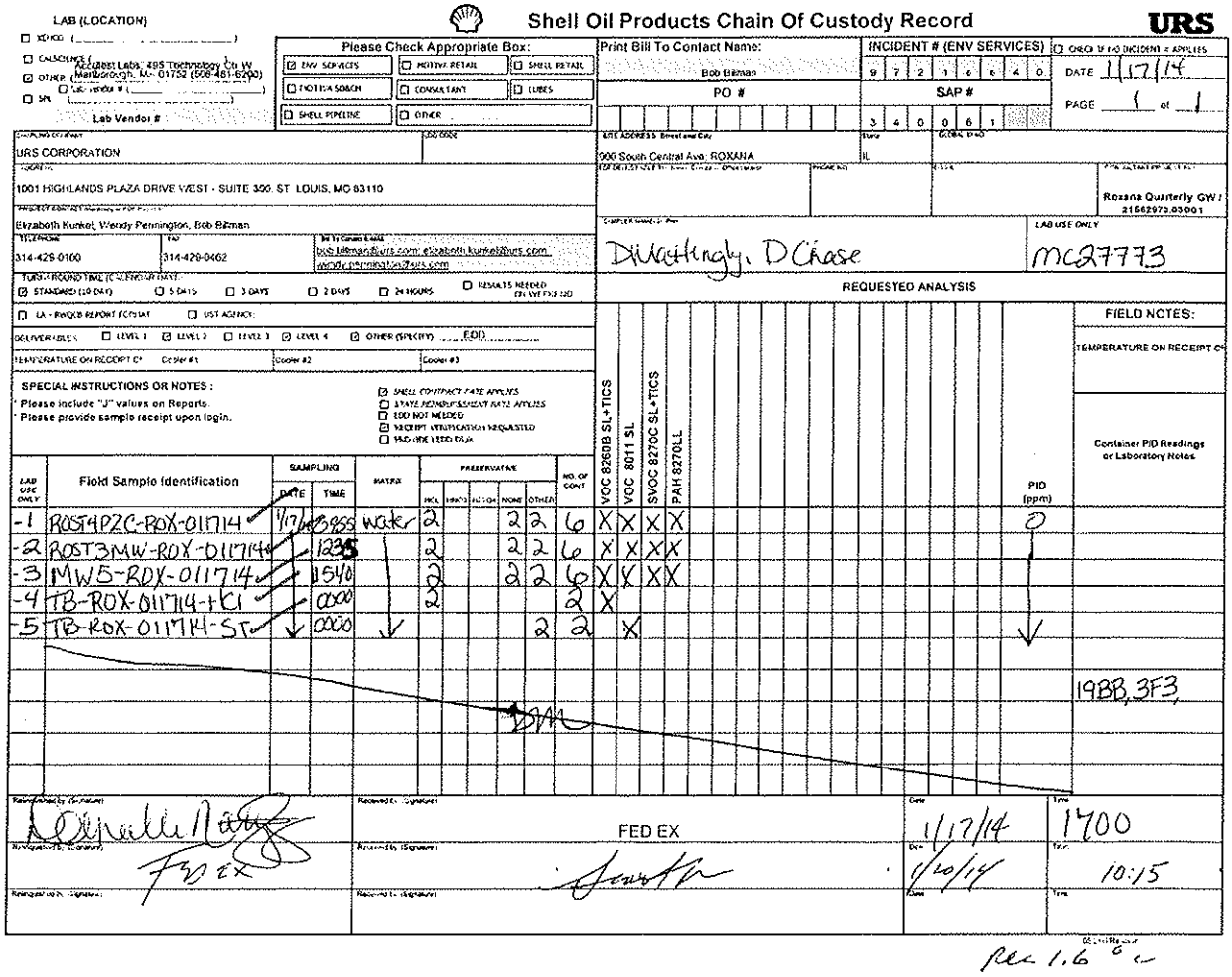
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	110%		36-173%
460-00-4	Bromofluorobenzene (S)	88%		36-173%

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

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 Ctr 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 SO&GN ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE 1/17/14

PAGE 1 of 1

CHARGE TO: URS CORPORATION

CODE:

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA

State: IL

GLOBAL ID NO:

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

CONTACT NAME: Elizabeth Kunkel, Wendy Pennington, Bob Billman

PHONE NO:

CITY:

FOR ALLIANCE PROJECT NO.: Roxana Quarterly GW / 21562973.03001

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Contact E-MAIL: bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

SAMPLER NAME(S) PRINT: D Wattingly, D Chase

LAB USE ONLY: MC27773

TURN-AROUND TIME (CALENDAR DAY):
☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON LIVE FIRE MO

☐ 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
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PAID HIDE LEDD DATA

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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	ROST4P2C-ROX-011714	1/17/14	0955	water	2			2	2	6	X	X	X	X	0	
-2	ROST3MW-ROX-011714		1235		2			2	2	6	X	X	X	X		
-3	MW5-ROX-011714		1540		2			2	2	6	X	X	X	X		
-4	TB-ROX-011714-HCl		0000		2					2	X					
-5	TB-ROX-011714-ST		0000						2	2		X				
																19BB, 3F3,

DM

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/17/14	1700
FED EX	[signature]	1/20/14	10:15

Rec 1.6 °C

5.1

5

MC27773: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27773 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/20/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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 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

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27773

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27773-1 Collected: 17-JAN-14 09:55 By: ROST4PZC-ROX-011714				Received: 20-JAN-14 By:		
MC27773-1	SW846 8260C	21-JAN-14 18:23	AMY			V8260SL+
MC27773-1	SW846 8011	22-JAN-14 02:58	CZ	20-JAN-14	MT	V8011SL
MC27773-1	SW846 8270D	28-JAN-14 15:33	KR	21-JAN-14	MEW	AB8270SL+
MC27773-1	SW846 8270D BY SIM	30-JAN-14 10:38	KR	21-JAN-14	MEW	B8270SIMPAH
MC27773-1	SW846 8270D	31-JAN-14 20:27	KR	29-JAN-14	MEW	AB8270SL+
MC27773-2 Collected: 17-JAN-14 12:35 By: ROST3MW-ROX-011714				Received: 20-JAN-14 By:		
MC27773-2	SW846 8260C	21-JAN-14 18:49	AMY			V8260SL+
MC27773-2	SW846 8011	22-JAN-14 03:23	CZ	20-JAN-14	MT	V8011SL
MC27773-2	SW846 8270D	28-JAN-14 15:57	KR	21-JAN-14	MEW	AB8270SL+
MC27773-2	SW846 8270D BY SIM	30-JAN-14 11:00	KR	21-JAN-14	MEW	B8270SIMPAH
MC27773-2	SW846 8270D	31-JAN-14 20:51	KR	29-JAN-14	MEW	AB8270SL+
MC27773-3 Collected: 17-JAN-14 15:40 By: MW5-ROX-011714				Received: 20-JAN-14 By:		
MC27773-3	SW846 8260C	21-JAN-14 19:16	AMY			V8260SL+
MC27773-3	SW846 8011	22-JAN-14 03:48	CZ	20-JAN-14	MT	V8011SL
MC27773-3	SW846 8270D	28-JAN-14 16:21	KR	21-JAN-14	MEW	AB8270SL+
MC27773-3	SW846 8270D BY SIM	30-JAN-14 11:23	KR	21-JAN-14	MEW	B8270SIMPAH
MC27773-4 Collected: 17-JAN-14 00:00 By: TB-ROX-011714-HCL				Received: 20-JAN-14 By:		
MC27773-4	SW846 8260C	21-JAN-14 11:38	AMY			V8260SL+
MC27773-5 Collected: 17-JAN-14 00:00 By: TB-ROX-011714-ST				Received: 20-JAN-14 By:		
MC27773-5	SW846 8011	22-JAN-14 04:14	CZ	20-JAN-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/20/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27773-1.1	Walk In Ref #22	Thomas Abruzzise	01/21/14 16:11	Retrieve from Storage
MC27773-1.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 16:15	Retrieve from Storage
MC27773-1.3	VOC Ref #3	Amy Min Yang	01/21/14 11:21	Retrieve from Storage
MC27773-1.3	Amy Min Yang	GCMSV	01/21/14 11:21	Load on Instrument
MC27773-1.3	GCMSV	Amy Min Yang	01/22/14 10:41	Unload from Instrument
MC27773-1.3	Amy Min Yang	VOC Ref #3	01/22/14 10:41	Return to Storage
MC27773-1.5	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27773-1.6	VOC Ref #3	Marc Tahtamoni	01/21/14 09:54	Retrieve from Storage
MC27773-2.1	Walk In Ref #22	Thomas Abruzzise	01/21/14 16:11	Retrieve from Storage
MC27773-2.2	Walk In Ref #22	Ruben Parrilla	01/21/14 16:08	Retrieve from Storage
MC27773-2.2	Ruben Parrilla	Walk In Ref #22	01/21/14 16:27	Return to Storage
MC27773-2.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 16:15	Retrieve from Storage
MC27773-2.4	VOC Ref #3	Amy Min Yang	01/21/14 11:21	Retrieve from Storage
MC27773-2.4	Amy Min Yang	GCMSV	01/21/14 11:21	Load on Instrument
MC27773-2.4	GCMSV	Amy Min Yang	01/22/14 10:41	Unload from Instrument
MC27773-2.4	Amy Min Yang	VOC Ref #3	01/22/14 10:41	Return to Storage
MC27773-2.5	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27773-3.1	Walk In Ref #22	Thomas Abruzzise	01/21/14 16:11	Retrieve from Storage
MC27773-3.2	Walk In Ref #22	Ruben Parrilla	01/21/14 16:08	Retrieve from Storage
MC27773-3.2	Ruben Parrilla	Walk In Ref #22	01/21/14 16:27	Return to Storage
MC27773-3.3	VOC Ref #3	Amy Min Yang	01/21/14 11:21	Retrieve from Storage
MC27773-3.3	Amy Min Yang	GCMSV	01/21/14 11:21	Load on Instrument
MC27773-3.3	GCMSV	Amy Min Yang	01/22/14 10:41	Unload from Instrument
MC27773-3.3	Amy Min Yang	VOC Ref #3	01/22/14 10:41	Return to Storage
MC27773-3.5	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage
MC27773-4.1	VOC Ref #3	Amy Min Yang	01/21/14 11:21	Retrieve from Storage
MC27773-4.1	Amy Min Yang	GCMSV	01/21/14 11:21	Load on Instrument
MC27773-4.1	GCMSV	Amy Min Yang	01/22/14 10:41	Unload from Instrument
MC27773-4.1	Amy Min Yang	VOC Ref #3	01/22/14 10:41	Return to Storage
MC27773-5.1	VOC Ref #3	Marc Tahtamoni	01/20/14 18:27	Retrieve from Storage

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-MB	V27220.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ng/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ng/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-MB	V27220.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-MB	V27220.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dihromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	97%	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

6

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-BS	V27216.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	52.0	104	70-130
107-02-8	Acrolein	50	79.5	159* [a]	70-130
107-13-1	Acrylonitrile	100	102	102	70-130
71-43-2	Benzene	50	52.5	105	70-130
108-86-1	Bromobenzene	50	53.2	106	70-130
74-97-5	Bromochloromethane	50	52.3	105	70-130
75-27-4	Bromodichloromethane	50	56.1	112	70-130
75-25-2	Bromoform	50	44.9	90	70-130
74-83-9	Bromomethane	50	48.0	96	70-130
78-93-3	2-Butanone (MEK)	50	51.1	102	70-130
104-51-8	n-Butylbenzene	50	56.4	113	70-130
135-98-8	sec-Bntylbenzene	50	57.8	116	70-130
98-06-6	tert-Butylbenzene	50	56.9	114	70-130
75-15-0	Carbon disulfide	50	47.3	95	70-130
56-23-5	Carbon tetrachloride	50	58.1	116	70-130
108-90-7	Chlorobenzene	50	46.7	93	70-130
75-00-3	Chloroethane	50	57.7	115	70-130
110-75-8	2-Chloroethyl vinyl ether	50	215	430* [a]	70-130
67-66-3	Chloroform	50	50.7	101	70-130
74-87-3	Chloromethane	50	51.0	102	70-130
95-49-8	o-Chlorotoluene	50	52.2	104	70-130
106-43-4	p-Chlorotoluene	50	53.4	107	70-130
124-48-1	Dibromochloromethane	50	57.7	115	70-130
95-50-1	1,2-Dichlorobenzene	50	49.3	99	70-130
541-73-1	1,3-Dichlorobenzene	50	49.9	100	70-130
106-46-7	1,4-Dichlorobenzene	50	49.8	100	70-130
75-71-8	Dichlorodifluoromethane	50	52.1	104	70-130
75-34-3	1,1-Dichloroethane	50	52.7	105	70-130
107-06-2	1,2-Dichloroethane	50	52.3	105	70-130
75-35-4	1,1-Dichloroethene	50	54.1	108	70-130
156-59-2	cis-1,2-Dichloroethene	50	52.0	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	52.5	105	70-130
78-87-5	1,2-Dichloropropane	50	50.6	101	70-130
142-28-9	1,3-Dichloropropane	50	50.9	102	70-130
594-20-7	2,2-Dichloropropane	50	62.4	125	70-130
563-58-6	1,1-Dichloropropene	50	53.4	107	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-BS	V27216.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	48.8	98	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.0	104	70-130
123-91-1	1,4-Dioxane	250	245	98	70-130
97-63-2	Ethyl methacrylate	50	49.0	98	77-137
100-41-4	Ethylbenzene	50	53.8	108	70-130
87-68-3	Hexachlorobutadiene	50	59.0	118	70-130
591-78-6	2-Hexanone	50	50.2	100	70-130
98-82-8	Isopropylbenzene	50	58.6	117	70-130
99-87-6	p-Isopropyltoluene	50	56.5	113	70-130
1634-04-4	Methyl Tert Bntyl Ether	50	57.5	115	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	54.8	110	70-130
74-95-3	Methylene bromide	50	51.7	103	70-130
75-09-2	Methylene chloride	50	48.4	97	70-130
91-20-3	Naphthalene	50	55.2	110	70-130
103-65-1	n-Propylbenzene	50	56.0	112	70-130
100-42-5	Styrene	50	49.8	100	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	53.3	107	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.5	103	70-130
127-18-4	Tetrachloroethene	50	54.7	109	70-130
108-88-3	Toluene	50	55.0	110	70-130
87-61-6	1,2,3-Trichlorobenzene	50	61.1	122	70-130
120-82-1	1,2,4-Trichlorobenzene	50	61.8	124	70-130
71-55-6	1,1,1-Trichloroethane	50	57.0	114	70-130
79-00-5	1,1,2-Trichloroethane	50	51.8	104	70-130
79-01-6	Trichloroethene	50	53.4	107	70-130
75-69-4	Trichlorofluoromethane	50	57.5	115	70-130
96-18-4	1,2,3-Trichloropropane	50	55.1	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	57.3	115	70-130
108-67-8	1,3,5-Trimethylbenzene	50	58.3	117	70-130
108-05-4	Vinyl Acetate	50	52.6	105	70-130
75-01-4	Vinyl chloride	50	45.1	90	70-130
	m,p-Xylene	100	89.9	90	70-130
95-47-6	o-Xylene	50	44.7	89	70-130
1330-20-7	Xylene (total)	150	135	90	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1028-BS	V27216.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27705-3MS	V27231.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3MSD	V27232.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3	V27228.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	MC27705-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	68.9		50	91.3	45* [a]	95.8	54* [a]	5	70-130/30
107-02-8	Acrolein	ND		50	69.3	139* [a]	70.1	140* [a]	1	70-130/30
107-13-1	Acrylonitrile	ND		100	107	107	109	109	2	70-130/30
71-43-2	Benzene	0.67		50	56.8	112	56.4	111	1	70-130/30
108-86-1	Bromobenzene	ND		50	58.1	116	57.5	115	1	70-130/30
74-97-5	Bromochloromethane	ND		50	55.4	111	56.3	113	2	70-130/30
75-27-4	Bromodichloromethane	ND		50	59.0	118	58.7	117	1	70-130/30
75-25-2	Bromoform	ND		50	46.3	93	46.6	93	1	70-130/30
74-83-9	Bromomethane	ND		50	49.5	99	48.1	96	3	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	38.5	77	39.8	80	3	70-130/30
104-51-8	n-Butylbenzene	ND		50	63.1	126	61.6	123	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50	63.0	126	62.2	124	1	70-130/30
98-06-6	tert-Butylbenzene	ND		50	62.1	124	60.9	122	2	70-130/30
75-15-0	Carbon disulfide	ND		50	50.6	101	50.7	101	0	70-130/30
56-23-5	Carbon tetrachloride	ND		50	61.9	124	60.5	121	2	70-130/30
108-90-7	Chlorobenzene	ND		50	50.4	101	49.4	99	2	70-130/30
75-00-3	Chloroethane	ND		50	59.1	118	57.6	115	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	0.0	0* [a]	0.0	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		50	54.2	108	53.2	106	2	70-130/30
74-87-3	Chloromethane	ND		50	55.4	111	51.0	102	8	70-130/30
95-49-8	o-Chlorotoluene	ND		50	57.1	114	56.1	112	2	70-130/30
106-43-4	p-Chlorotoluene	ND		50	58.2	116	57.2	114	2	70-130/30
124-48-1	Dibromochloromethane	ND		50	60.7	121	60.4	121	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	53.1	106	53.0	106	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	54.2	108	53.5	107	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	53.6	107	53.2	106	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	59.8	120	56.7	113	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	56.4	113	55.7	111	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	55.9	112	55.0	110	2	70-130/30
75-35-4	1,1-Dichloroetheue	ND		50	58.8	118	58.9	118	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	56.5	113	55.8	112	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	56.7	113	56.3	113	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	54.3	109	53.7	107	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	54.1	108	53.9	108	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	66.1	132* [a]	64.5	129	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	58.1	116	56.4	113	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27705-3MS	V27231.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3MSD	V27232.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3	V27228.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Compound	MC27705-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	50.4	101	50.7	101	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	54.5	109	54.9	110	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	255	102	257	103	1	70-130/30
97-63-2	Ethyl methacrylate	ND		50	52.5	105	52.7	105	0	72-139/30
100-41-4	Ethylbenzene	0.79	J	50	58.7	116	57.3	113	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	63.6	127	62.6	125	2	70-130/30
591-78-6	2-Hexanone	ND		50	41.9	84	43.0	86	3	70-130/30
98-82-8	Isopropylbenzene	1.2	J	50	65.5	129	65.1	128	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	61.1	122	60.2	120	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	59.3	119	61.6	123	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	58.3	117	60.2	120	3	70-130/30
74-95-3	Methylene bromide	ND		50	54.7	109	55.0	110	1	70-130/30
75-09-2	Methylene chloride	ND		50	52.6	105	52.6	105	0	70-130/30
91-20-3	Naphthalene	ND		50	55.4	111	63.3	127	13	70-130/30
103-65-1	n-Propylbenzene	2.4	J	50	64.1	123	62.6	120	2	70-130/30
100-42-5	Styrene	ND		50	53.2	106	52.4	105	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	56.4	113	55.9	112	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	55.3	111	57.0	114	3	70-130/30
127-18-4	Tetrachloroethene	ND		50	58.4	117	57.1	114	2	70-130/30
108-88-3	Toluene	ND		50	59.5	119	59.1	118	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	59.8	120	66.3	133* [a]	10	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	65.7	131* [a]	68.8	138* [a]	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	60.8	122	59.5	119	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	55.8	112	55.5	111	1	70-130/30
79-01-6	Trichloroethene	ND		50	58.0	116	57.0	114	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	58.5	117	55.7	111	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	58.8	118	59.8	120	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	3.5	J	50	66.6	126	66.4	126	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	63.6	127	62.8	126	1	70-130/30
108-05-4	Vinyl Acetate	ND		50	56.5	113	56.5	113	0	70-130/30
75-01-4	Vinyl chloride	ND		50	47.2	94	45.9	92	3	70-130/30
	m,p-Xylene	ND		100	95.7	96	94.7	95	1	70-130/30
95-47-6	o-Xylene	ND		50	47.8	96	47.6	95	0	70-130/30
1330-20-7	Xylene (total)	ND		150	144	96	142	95	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27705-3MS	V27231.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3MSD	V27232.D	1	01/21/14	AMY	n/a	n/a	MSV1028
MC27705-3	V27228.D	1	01/21/14	AMY	n/a	n/a	MSV1028

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

MC27773-1, MC27773-2, MC27773-3, MC27773-4

CAS No.	Surrogate Recoveries	MS	MSD	MC27705-3	Limits
1868-53-7	Dibromofluoromethane	97%	96%	104%	70-130%
2037-26-5	Toluene-D8	99%	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	99%	101%	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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1028-CC1019	Injection Date:	01/21/14
Lab File ID:	V27215.D	Injection Time:	09:00
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	588878	6.56	744820	7.74	409459	11.08	447654	13.29	189163	3.51
Upper Limit [a]	1177756	7.06	1489640	8.24	818918	11.58	895308	13.79	378326	4.01
Lower Limit [b]	294439	6.06	372410	7.24	204730	10.58	223827	12.79	94582	3.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1028-BS	590554	6.56	744245	7.74	406622	11.08	447661	13.29	202611	3.52
MSV1028-MB	465748	6.57	628808	7.74	353291	11.08	340176	13.29	165458	3.52
MC27773-4	451952	6.56	613287	7.74	345219	11.08	332490	13.29	147157	3.51
ZZZZZZ	448584	6.57	606812	7.75	342109	11.08	329524	13.29	155683	3.52
ZZZZZZ	436838	6.57	590442	7.75	331617	11.08	327534	13.29	161945	3.52
ZZZZZZ	443949	6.56	597694	7.74	336779	11.08	335261	13.29	158981	3.51
ZZZZZZ	558386	6.56	714316	7.74	398770	11.08	402211	13.29	246459	3.52
ZZZZZZ	502195	6.56	670949	7.74	375671	11.08	369854	13.29	188944	3.51
ZZZZZZ	484909	6.56	661585	7.74	362607	11.08	359422	13.29	179069	3.51
MC27705-3	478560	6.57	637310	7.75	353164	11.08	355566	13.29	180882	3.53
ZZZZZZ	471337	6.57	639052	7.75	357066	11.08	340884	13.29	179175	3.52
ZZZZZZ	487458	6.57	624613	7.75	346485	11.08	339067	13.29	182211	3.52
MC27705-3MS	552667	6.57	695032	7.75	380171	11.08	408442	13.29	186802	3.52
MC27705-3MSD	567936	6.57	716639	7.75	394448	11.08	421344	13.29	198494	3.52
ZZZZZZ	527447	6.57	708344	7.75	377706	11.08	374878	13.29	189258	3.52
ZZZZZZ	491898	6.57	663077	7.75	368912	11.08	356607	13.29	180436	3.52
ZZZZZZ	471066	6.57	649882	7.75	360980	11.08	350508	13.29	169777	3.52
MC27773-1	532933	6.57	671008	7.75	362312	11.08	358663	13.29	204946	3.52
MC27773-2	603231	6.57	765800	7.75	397090	11.08	387617	13.29	282162	3.53
MC27773-3	591628	6.57	725640	7.75	408687	11.08	398763	13.29	217800	3.52
ZZZZZZ	501850	6.57	681549	7.75	370369	11.08	370302	13.29	165071	3.52
ZZZZZZ	500108	6.57	673504	7.75	372450	11.08	364783	13.29	173373	3.53
ZZZZZZ	494177	6.57	661425	7.75	364859	11.08	362304	13.29	167158	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.

Volatile Surrogate Recovery Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27773-1	V27236.D	95.0	100.0	105.0
MC27773-2	V27237.D	92.0	97.0	103.0
MC27773-3	V27238.D	92.0	100.0	107.0
MC27773-4	V27221.D	107.0	98.0	104.0
MC27705-3MS	V27231.D	97.0	99.0	100.0
MC27705-3MSD	V27232.D	96.0	99.0	99.0
MSV1028-BS	V27216.D	97.0	99.0	98.0
MSV1028-MB	V27220.D	105.0	97.0	104.0

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

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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 Sonth Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MB	W17395.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ng/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ng/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MB	W17395.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	42%	15-110%
4165-62-2	Phenol-d5	29%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	15-110%
4165-60-0	Nitrobenzene-d5	69%	30-130%
321-60-8	2-Fluorobiphenyl	71%	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	

Method Blank Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	33%	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	76%	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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36621-MB	I87103.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27773-1, MC27773-2, MC27773-3

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	Beuzo(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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	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	76%	30-130%
321-60-8	2-Fluorobipheuyl	65%	30-130%
1718-51-0	Terphenyl-d14	82%	30-130%

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-BS	W17396.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

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	37.3	75	30-130
59-50-7	4-Chloro-3-methyl phenol	50	34.3	69	30-130
120-83-2	2,4-Dichlorophenol	50	36.9	74	30-130
105-67-9	2,4-Dimethylphenol	50	32.8	66	30-130
51-28-5	2,4-Dinitrophenol	50	31.3	63	30-130
534-52-1	4,6-Dinitro-o-cresol	50	43.3	87	30-130
95-48-7	2-Methylphenol	50	30.6	61	30-130
	3&4-Methylphenol	100	55.0	55	30-130
88-75-5	2-Nitrophenol	50	39.7	79	30-130
100-02-7	4-Nitrophenol	50	13.6	27* [a]	30-130
87-86-5	Pentachlorophenol	50	38.3	77	30-130
108-95-2	Phenol	50	16.4	33	30-130
95-95-4	2,4,5-Trichlorophenol	50	35.9	72	30-130
88-06-2	2,4,6-Trichlorophenol	50	37.8	76	30-130
62-53-3	Aniline	50	26.6	53	40-140
101-55-3	4-Bromophenyl phenyl ether	50	52.3	105	40-140
85-68-7	Butyl benzyl phthalate	50	43.0	86	40-140
100-51-6	Benzyl Alcohol	50	34.9	70	40-140
91-58-7	2-Chloronaphthalene	50	38.6	77	40-140
106-47-8	4-Chloroaniline	50	38.1	76	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	32.3	65	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.5	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	94.5	189* [b]	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.3	87	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.8	84	40-140
121-14-2	2,4-Dinitrotoluene	50	41.2	82	40-140
606-20-2	2,6-Dinitrotoluene	50	40.3	81	40-140
91-94-1	3,3'-Dichlorobenzidine	50	41.8	84	40-140
132-64-9	Dibenzofuran	50	39.5	79	40-140
84-74-2	Di-n-butyl phthalate	50	39.4	79	40-140
117-84-0	Di-n-octyl phthalate	50	41.5	83	40-140
84-66-2	Diethyl phthalate	50	37.0	74	40-140
131-11-3	Dimethyl phthalate	50	32.1	64	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	45.4	91	40-140
118-74-1	Hexachlorobenzene	50	53.5	107	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-BS	W17396.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	57.9	116	40-140
67-72-1	Hexachloroethane	50	30.6	61	40-140
78-59-1	Isophorone	50	40.4	81	40-140
88-74-4	2-Nitroaniline	50	39.6	79	40-140
99-09-2	3-Nitroaniline	50	37.1	74	40-140
100-01-6	4-Nitroaniline	50	37.2	74	40-140
98-95-3	Nitrobenzene	50	41.7	83	40-140
62-75-9	n-Nitrosodimethylamine	50	31.7	63	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.0	82	40-140
86-30-6	N-Nitrosodiphenylamine	50	39.6	79	40-140
110-86-1	Pyridine	50	27.5	55	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	15-110%
4165-62-2	Phenol-d5	31%	15-110%
118-79-6	2,4,6-Tribromophenol	103%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	76%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

(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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1

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	44.8	90	30-130
59-50-7	4-Chloro-3-methyl pheuol	50	48.5	97	30-130
120-83-2	2,4-Dichlorophenol	50	51.3	103	30-130
105-67-9	2,4-Dimethylphenol	50	41.8	84	30-130
51-28-5	2,4-Dinitrophenol	50	50.0	100	30-130
534-52-1	4,6-Dinitro-o-cresol	50	54.1	108	30-130
95-48-7	2-Methylphenol	50	41.6	83	30-130
	3&4-Methylphenol	100	79.2	79	30-130
88-75-5	2-Nitrophenol	50	51.1	102	30-130
100-02-7	4-Nitrophenol	50	22.4	45	30-130
87-86-5	Pentachlorophenol	50	44.1	88	30-130
108-95-2	Phenol	50	21.4	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.8	102	30-130
88-06-2	2,4,6-Trichlorophenol	50	49.1	98	30-130

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	37%	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	82%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36621-BS	I87104.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	40.0	80	40-140
208-96-8	Acenaphthylene	50	35.0	70	40-140
120-12-7	Anthracene	50	38.7	77	40-140
56-55-3	Benzo(a)anthracene	50	46.1	92	40-140
50-32-8	Benzo(a)pyrene	50	43.8	88	40-140
205-99-2	Benzo(b)fluoranthene	50	47.6	95	40-140
191-24-2	Benzo(g,h,i)perylene	50	49.5	99	40-140
207-08-9	Benzo(k)fluoranthene	50	45.6	91	40-140
218-01-9	Chrysene	50	44.0	88	40-140
53-70-3	Dibenzo(a,h)anthracene	50	50.5	101	40-140
206-44-0	Fluoranthene	50	44.4	89	40-140
86-73-7	Fluorene	50	39.8	80	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	50.0	100	40-140
90-12-0	1-Methylnaphthalene	50	37.0	74	40-140
91-57-6	2-Methylnaphthalene	50	36.2	72	40-140
85-01-8	Phenanthrene	50	39.1	78	40-140
129-00-0	Pyrene	50	43.3	87	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	71%	30-130%
1718-51-0	Terphenyl-d14	80%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MS	W17397.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
OP36620-MSD	W17398.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
MC27500-15	W17399.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	MC27500-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	23.3	47	21.5	43	8	30-130/20
95-57-8	2-Chlorophenol	ND		50	39.5	79	39.5	79	0	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	36.4	73	37.7	75	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	39.8	80	39.5	79	1	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	35.5	71	35.7	71	1	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	35.1	70	34.3	69	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	47.7	95	47.6	95	0	30-130/20
95-48-7	2-Methylphenol	ND		50	33.8	68	33.4	67	1	30-130/20
	3&4-Methylphenol	ND		100	60.8	61	60.6	61	0	30-130/20
88-75-5	2-Nitrophenol	ND		50	43.2	86	43.7	87	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	15.3	31	14.5	29* [a]	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	41.4	83	41.7	83	1	30-130/20
108-95-2	Phenol	ND		50	18.2	36	17.7	35	3	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	39.6	79	38.6	77	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	40.3	81	40.4	81	0	30-130/20
62-53-3	Aniline	ND		50	28.8	58	28.7	57	0	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	55.3	111	54.8	110	1	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	46.6	93	45.4	91	3	40-140/20
100-51-6	Beuzyl Alcohol	ND		50	37.1	74	36.9	74	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	40.5	81	40.6	81	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	40.2	80	40.2	80	0	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	34.2	68	34.3	69	0	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	48.6	97	48.4	97	0	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	102	204* [b]	102	204* [b]	0	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	47.3	95	46.8	94	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	44.4	89	44.2	88	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.0	88	43.6	87	1	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	42.8	86	43.5	87	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	44.9	90	43.9	88	2	40-140/20
132-64-9	Dibenzofuran	ND		50	42.3	85	42.6	85	1	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	42.5	85	41.5	83	2	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	46.1	92	44.6	89	3	40-140/20
84-66-2	Diethyl phthalate	ND		50	40.5	81	40.1	80	1	40-140/20
131-11-3	Dimethyl phthalate	ND		50	33.9	68	36.2	72	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	48.2	96	47.1	94	2	40-140/20
118-74-1	Hexachlorobenzene	ND		50	56.7	113	56.2	112	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36620-MS	W17397.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
OP36620-MSD	W17398.D	1	01/28/14	KR	01/21/14	OP36620	MSW765
MC27500-15	W17399.D	1	01/28/14	KR	01/21/14	OP36620	MSW765

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	MC27500-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	59.7	119	61.1	122	2	40-140/20
67-72-1	Hexachloroethane	ND		50	32.6	65	33.7	67	3	40-140/20
78-59-1	Isophorone	ND		50	43.4	87	43.6	87	0	40-140/20
88-74-4	2-Nitroaniline	ND		50	42.8	86	43.2	86	1	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.5	81	40.6	81	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	40.7	81	39.9	80	2	40-140/20
98-95-3	Nitrobenzene	ND		50	44.6	89	44.8	90	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	34.5	69	34.4	69	0	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	43.2	86	44.4	89	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	42.7	85	42.0	84	2	40-140/20
110-86-1	Pyridine	ND		50	29.3	59	29.2	58	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-15	Limits
367-12-4	2-Fluorophenol	50%	50%	41%	15-110%
4165-62-2	Phenol-d5	35%	34%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	111%* [c]	112%* [c]	91%	15-110%
4165-60-0	Nitrobenzene-d5	80%	81%	69%	30-130%
321-60-8	2-Fluorobiphenyl	81%	81%	70%	30-130%
1718-51-0	Terphenyl-d14	100%	97%	91%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Ontside control limits. Associated samples are non-detect for this componnd.
(c) Outside control limits dne to possible matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27773-1

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	4.1	7* [a]	33.7	63	157* [b]	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	46.0	84	45.3	85	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	50.8	92	53.5	101	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	49.8	91	52.1	98	5	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	49.4	90	51.7	97	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	44.0	80	55.9	105	24* [b]	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	53.5	97	60.4	114	12	30-130/20
95-48-7	2-Methylphenol	ND		54.9	45.5	83	47.7	90	5	30-130/20
	3&4-Methylphenol	ND		110	90.6	82	96.6	91	6	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	49.1	89	50.9	96	4	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	27.3	50	32.7	61	18	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	47.4	86	53.8	101	13	30-130/20
108-95-2	Phenol	ND		54.9	26.3	48	29.9	56	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.8	87	55.0	103	14	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	45.1	82	54.1	102	18	30-130/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
367-12-4	2-Fluorophenol	51%	50%	47%	15-110%
4165-62-2	Phenol-d5	41%	49%	36%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	95%	78%	15-110%
4165-60-0	Nitrobenzene-d5	81%	88%	84%	30-130%
321-60-8	2-Fluorobiphenyl	61%	77%	75%	30-130%
1718-51-0	Terphenyl-d14	80%	92%	85%	30-130%

(a) Outside coutrol 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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36621-MS	I87105.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239
OP36621-MSD	I87106.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239
MC27500-16	I87107.D	1	01/30/14	KR	01/21/14	OP36621	MSI3239

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27773-1, MC27773-2, MC27773-3

CAS No.	Compound	MC27500-16 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	42.5	85	42.8	86	1	40-140/20
208-96-8	Acenaphthylene	ND		50	36.5	73	36.9	74	1	40-140/20
120-12-7	Anthracene	ND		50	41.1	82	40.7	81	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	50.0	100	48.7	97	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	47.9	96	47.2	94	1	40-140/20
205-99-2	Benzo(h)fluoranthene	ND		50	51.4	103	50.8	102	1	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	53.8	108	53.3	107	1	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	49.2	98	48.3	97	2	40-140/20
218-01-9	Chrysene	ND		50	47.9	96	47.0	94	2	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	54.7	109	54.0	108	1	40-140/20
206-44-0	Fluoranthene	ND		50	47.3	95	46.8	94	1	40-140/20
86-73-7	Fluorene	ND		50	42.1	84	42.4	85	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	54.2	108	53.7	107	1	40-140/20
90-12-0	1-Methylnaphtbalene	ND		50	38.8	78	39.0	78	1	40-140/20
91-57-6	2-Methylnaphtbalene	ND		50	37.9	76	38.3	77	1	40-140/20
85-01-8	Phenanthrene	0.016	J	50	41.9	84	41.8	84	0	40-140/20
129-00-0	Pyrene	ND		50	46.7	93	45.7	91	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-16	Limits
4165-60-0	Nitrobenzene-d5	87%	86%	76%	30-130%
321-60-8	2-Fluorobiphenyl	74%	73%	65%	30-130%
1718-51-0	Terphenyl-d14	86%	84%	78%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3239-CC3238	Injection Date:	01/30/14
Lab File ID:	I87101.D	Injection Time:	07:51
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	368440	4.44	823251	5.50	447664	7.05	728855	8.48	425472	11.25	1132082	12.76
Upper Limit [a]	736880	4.94	1646502	6.00	895328	7.55	1457710	8.98	850944	11.75	2264164	13.26
Lower Limit [b]	184220	3.94	411626	5.00	223832	6.55	364428	7.98	212736	10.75	566041	12.26
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
OP36621-MB	363579	4.44	804070	5.50	438617	7.05	711170	8.48	417256	11.25	1076238	12.76
OP36621-BS	342859	4.44	765293	5.50	412884	7.05	659605	8.48	391751	11.25	997009	12.76
OP36621-MS	340425	4.44	764133	5.50	410389	7.05	658497	8.48	391672	11.25	990947	12.76
OP36621-MSD	335299	4.44	748703	5.50	403197	7.05	644610	8.48	383983	11.25	966266	12.76
MC27500-16	363031	4.44	792804	5.50	430086	7.05	704368	8.48	416719	11.25	1074717	12.76
MC27773-1	362479	4.44	803883	5.50	433857	7.05	710070	8.48	419088	11.25	1079861	12.76
MC27773-2	374744	4.44	842985	5.50	454423	7.05	734936	8.48	442323	11.25	1133969	12.76
MC27773-3	384671	4.44	844554	5.50	459493	7.05	740686	8.48	439399	11.25	1118578	12.76
ZZZZZZ	376572	4.44	824712	5.50	446241	7.05	729180	8.48	431917	11.25	1115277	12.76
ZZZZZZ	396522	4.44	865944	5.50	468508	7.05	761309	8.48	451532	11.25	1155077	12.76
ZZZZZZ	360532	4.44	791654	5.50	431786	7.05	694085	8.48	414803	11.25	1070614	12.76
ZZZZZZ	377534	4.44	824773	5.50	443134	7.05	720459	8.48	419662	11.25	1091219	12.76
ZZZZZZ	345875	4.44	758237	5.50	406460	7.05	660536	8.48	390351	11.25	1010630	12.76

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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	W17393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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	62557	4.48	241630	5.55	164010	7.10	289333	8.40	285398	11.11	259098	12.89
Upper Limit [a]	125114	4.98	483260	6.05	328020	7.60	578666	8.90	570796	11.61	518196	13.39
Lower Limit [b]	31279	3.98	120815	5.05	82005	6.60	144667	7.90	142699	10.61	129549	12.39
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
OP36573-MSD	51600	4.48	190131	5.55	128488	7.10	220953	8.40	218789	11.11	199324	12.88
OP36620-MB	45862	4.48	171683	5.55	116403	7.09	211050	8.39	214282	11.10	200174	12.88
OP36620-BS	45909	4.48	170101	5.55	113627	7.10	193051	8.40	187125	11.11	171996	12.88
OP36620-MS	44598	4.48	166443	5.55	112276	7.10	193739	8.40	188534	11.11	171696	12.88
OP36620-MSD	43903	4.48	165388	5.55	112667	7.10	193301	8.40	191069	11.11	173530	12.88
MC27500-15	48317	4.48	181787	5.55	122934	7.09	213141	8.39	215160	11.10	200306	12.88
OP36563-MB	54118	4.48	200323	5.55	135366	7.10	232394	8.39	233497	11.10	220000	12.88
OP36563-BS	48812	4.48	182943	5.55	126214	7.10	217602	8.40	212988	11.11	195739	12.88
OP36563-MS	55916	4.48	209206	5.55	140461	7.10	244558	8.40	238395	11.11	221713	12.88
OP36563-MSD	56353	4.48	210312	5.55	143282	7.10	244228	8.40	239235	11.11	220906	12.88
MC27677-1	54709	4.48	199963	5.55	134961	7.09	231738	8.39	235112	11.10	219462	12.88
ZZZZZZ	54563	4.48	203471	5.55	137740	7.09	236842	8.39	238154	11.10	222161	12.88
ZZZZZZ	61301	4.48	230387	5.55	154264	7.10	269640	8.39	272751	11.10	253622	12.88
ZZZZZZ	57755	4.48	213449	5.55	146595	7.09	249372	8.39	250888	11.10	231448	12.88
ZZZZZZ	50853	4.48	189728	5.55	128577	7.09	220989	8.39	220023	11.10	204076	12.88
ZZZZZZ	55848	4.48	213248	5.55	142653	7.09	246402	8.39	245601	11.10	229553	12.88
ZZZZZZ	53240	4.48	196467	5.55	133356	7.09	228689	8.39	225563	11.10	213548	12.88
MC27773-1	52274	4.48	192442	5.55	130055	7.09	228547	8.39	228730	11.10	212344	12.88
MC27773-2	54439	4.48	200602	5.55	136943	7.09	237044	8.39	240182	11.10	221646	12.88
MC27773-3	58150	4.48	207725	5.55	137150	7.09	227587	8.39	222648	11.11	208058	12.88
ZZZZZZ	54910	4.48	207479	5.55	138901	7.09	240133	8.39	240756	11.10	219052	12.88
ZZZZZZ	58503	4.48	215219	5.55	143541	7.09	247033	8.39	246022	11.11	225669	12.88
ZZZZZZ	52722	4.48	197534	5.55	132861	7.09	225541	8.39	222046	11.10	206645	12.88
ZZZZZZ	58030	4.48	215283	5.55	144996	7.09	250030	8.39	254277	11.10	236176	12.88
ZZZZZZ	63690	4.48	235910	5.55	150881	7.09	252450	8.39	223048	11.10	191703	12.88
ZZZZZZ	61578	4.48	231467	5.55	152070	7.09	255098	8.39	236051	11.10	211469	12.88
ZZZZZZ	57035	4.49	178697	5.57	143478	7.13	188566	8.43	203038	11.12	197699	12.89
ZZZZZZ	61983	4.48	207544	5.56	137495	7.11	213808	8.41	223896	11.11	200991	12.88

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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW765-CC729	Injection Date:	01/28/14
Lab File ID:	WI7393.D	Injection Time:	08:27
Instrument ID:	GCMSW	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.

Semivolatile Internal Standard Area Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW769-CC768	Injection Date:	01/31/14
Lab File ID:	W17504.D	Injection Time:	14:03
Instrument ID:	GCMSW	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	127972	4.43	485501	5.50	334388	7.04	591866	8.34	597548	11.03	565363	12.80
Upper Limit [a]	255944	4.93	971002	6.00	668776	7.54	1183732	8.84	1195096	11.53	1130726	13.30
Lower Limit [b]	63986	3.93	242751	5.00	167194	6.54	295933	7.84	298774	10.53	282682	12.30
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	99524	4.43	380576	5.50	256672	7.04	451897	8.33	473715	11.02	450981	12.79
OP36696-MB	122189	4.43	468126	5.50	314512	7.04	534810	8.34	557696	11.02	507871	12.79
OP36696-BS	120938	4.43	452433	5.50	309501	7.04	547614	8.34	556140	11.03	512591	12.79
OP36696-MS1	116668	4.43	434416	5.50	310319	7.04	506919	8.34	524219	11.03	495638	12.80
OP36696-MSD1	107431	4.43	407960	5.50	268557	7.04	462763	8.34	478038	11.03	452505	12.80
MC27977-1	105019	4.43	397827	5.50	269803	7.04	460242	8.34	479909	11.03	453703	12.79
ZZZZZZ	113960	4.43	423479	5.50	284797	7.04	489764	8.34	494820	11.02	465494	12.79
ZZZZZZ	118138	4.43	453493	5.50	290057	7.04	488959	8.34	490112	11.03	458896	12.80
ZZZZZZ	138491	4.43	518874	5.50	342103	7.04	571821	8.34	590476	11.02	548644	12.79
ZZZZZZ	128565	4.43	482434	5.50	318222	7.04	524619	8.34	524673	11.02	492702	12.79
ZZZZZZ	127617	4.43	475544	5.50	304916	7.04	503618	8.34	496909	11.03	468850	12.80
ZZZZZZ	115279	4.43	444808	5.50	299639	7.04	513205	8.34	522614	11.02	477473	12.79
ZZZZZZ	117456	4.43	441651	5.50	290607	7.04	487510	8.33	464333	11.02	430642	12.79
MC27773-1 [c]	116556	4.43	453160	5.50	302217	7.04	527013	8.33	541412	11.02	512409	12.79
MC27773-2 [d]	133300	4.43	499647	5.50	333145	7.04	569029	8.33	581304	11.02	547796	12.79
ZZZZZZ	183163	4.43	682316	5.50	441310	7.04	733255	8.33	698534	11.02	639754	12.79
ZZZZZZ	152850	4.43	544393	5.50	354327	7.04	571235	8.34	598677	11.02	581314	12.79

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) Sample re-extracted beyond recommended holding time.
(d) Confirmation run.

Semivolatile Surrogate Recovery Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27773-1	W17520.D	39.0	34.0	82.0	75.0	75.0	89.0
MC27773-1	W17411.D	5.0* [a]	8.0* [a]	43.0	67.0	67.0	85.0
MC27773-2	W17521.D	9.0* [b]	1.0* [b]	4.0* [b]	73.0	70.0	93.0
MC27773-2	W17412.D	2.0* [b]	2.0* [b]	10.0* [b]	61.0	61.0	88.0
MC27773-3	W17413.D	36.0	26.0	99.0	61.0	61.0	87.0
OP36620-BS	W17396.D	48.0	31.0	103.0	76.0	76.0	93.0
OP36620-MB	W17395.D	42.0	29.0	91.0	69.0	71.0	93.0
OP36620-MS	W17397.D	50.0	35.0	111.0* [c]	80.0	81.0	100.0
OP36620-MSD	W17398.D	50.0	34.0	112.0* [c]	81.0	81.0	97.0
OP36696-BS	W17507.D	54.0	37.0	94.0	86.0	82.0	92.0
OP36696-MB	W17506.D	48.0	33.0	88.0	78.0	76.0	89.0
OP36696-MS1	W17508.D	51.0	41.0	82.0	81.0	61.0	80.0
OP36696-MSD1	W17509.D	50.0	49.0	95.0	88.0	77.0	92.0

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. Sample re-extracted/reanalyzed.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
(c) Outside control limits due to possible matrix interference.

Semivolatile Surrogate Recovery Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27773-1	I87108.D	74.0	62.0	75.0
MC27773-2	I87109.D	65.0	56.0	79.0
MC27773-3	I87110.D	66.0	58.0	78.0
OP36621-BS	I87104.D	82.0	71.0	80.0
OP36621-MB	I87103.D	76.0	65.0	82.0
OP36621-MS	I87105.D	87.0	74.0	86.0
OP36621-MSD	I87106.D	86.0	73.0	84.0

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

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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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-MB	YZ87631.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27773-1, MC27773-2, MC27773-3, MC27773-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dihromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	123%	36-173%
460-00-4	Bromofluorobenzene (S)	107%	36-173%

Blank Spike Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-BS	YZ87632.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27773-1, MC27773-2, MC27773-3, MC27773-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.092	130	60-140
106-93-4	1,2-Dibromoethane	0.071	0.078	110	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	127%	36-173%
460-00-4	Bromofluorobenzene (S)	102%	36-173%

8.2.1

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* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36605-MS	YZ87633.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
OP36605-MSD	YZ87634.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475
MC27500-13	YZ87635.D	1	01/21/14	CZ	01/20/14	OP36605	GYZ7475

The QC reported here applies to the following samples: Method: SW846 8011

MC27773-1, MC27773-2, MC27773-3, MC27773-5

CAS No.	Compound	MC27500-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.091	128	0.080	113	13	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.078	110	0.071	100	9	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-13	Limits
460-00-4	Bromofluorobenzene (S)	124%	98%	110%	36-173%
460-00-4	Bromofluorobenzene (S)	117%	90%	101%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27773-1	YZ87647.D	96.0	92.0
MC27773-2	YZ87648.D	112.0	105.0
MC27773-3	YZ87649.D	165.0	130.0
MC27773-5	YZ87650.D	110.0	88.0
OP36605-BS	YZ87632.D	127.0	102.0
OP36605-MB	YZ87631.D	123.0	107.0
OP36605-MS	YZ87633.D	124.0	117.0
OP36605-MSD	YZ87634.D	98.0	90.0

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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7475-ICC7475	Injection Date:	01/21/14
Lab File ID:	YZ87626.D	Injection Time:	18:08
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.59	3.46

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ87629A.D	01/21/14	19:23	3.61	3.46
OP36605-MB	YZ87631.D	01/21/14	20:13	3.59	3.46
OP36605-BS	YZ87632.D	01/21/14	20:38	3.59	3.47
OP36605-MS	YZ87633.D	01/21/14	21:04	3.59	3.45
OP36605-MSD	YZ87634.D	01/21/14	21:29	3.59	3.46
MC27500-13	YZ87635.D	01/21/14	21:54	3.59	3.46
ZZZZZZ	YZ87636.D	01/21/14	22:19	3.59	3.45
ZZZZZZ	YZ87637.D	01/21/14	22:44	3.59	3.46
ZZZZZZ	YZ87638.D	01/21/14	23:10	3.59	3.46
ZZZZZZ	YZ87639.D	01/21/14	23:35	3.59	3.47
ZZZZZZ	YZ87640.D	01/22/14	00:00	3.59	3.47

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: MC27773
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7475-CC7475	Injection Date:	01/22/14
Lab File ID:	YZ87641.D	Injection Time:	00:26
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.59	3.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ87642.D	01/22/14	00:51	3.59	3.47
ZZZZZZ	YZ87643.D	01/22/14	01:16	3.59	3.46
ZZZZZZ	YZ87644.D	01/22/14	01:42	3.59	3.46
ZZZZZZ	YZ87645.D	01/22/14	02:07	3.59	3.46
ZZZZZZ	YZ87646.D	01/22/14	02:32	3.59	3.46
MC27773-1	YZ87647.D	01/22/14	02:58	3.59	3.47
MC27773-2	YZ87648.D	01/22/14	03:23	3.59	3.45
MC27773-3	YZ87649.D	01/22/14	03:48	3.59	3.44
MC27773-5	YZ87650.D	01/22/14	04:14	3.59	3.47
GYZ7475-ECC7475	YZ87651.D	01/22/14	04:39	3.59	3.46

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Roxana Groundwater Quarterly – 1st Quarter 2014 Data Review

Laboratory SDG: MC27802

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/26/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW2-ROX-012014	MW22-ROX-012014
MW22-ROX-012014-Dup	TB-ROX-012014-HCL
TB-ROX-012014-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the PAH compounds, phenanthrene and benzo(g,h,i)perylene were detected in the method blank; acetone was detected in the trip blank. VOC and SVOC LCS recoveries were outside evaluation criteria. VOC by 8011 surrogate bromofluorobenzene was outside evaluation criteria in sample MW22-ROX-012014. The internal standard area recovery for tert butyl alcohol-d_9 was outside criteria in field duplicate pair MW22-ROX-012014/MW22-ROX-012014-Dup. Samples 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 acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 1.0ºC, 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
TB-ROX-012014-HCL	VOCs	Acetone	6.4 µg/L
OP36627-MB	PAHs	Benzo(g,h,i)perylene	0.034 µg/L
OP36627-MB	PAHs	Phenanthrene	0.025 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required qualification. Qualifications due to blank contamination are included in the table below.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW2-ROX-012014	PAHs	Phenanthrene	-	**U**

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
MSV1029-BS	VOCs	Acrolein	**157**	NA	70-130
MSV1029-BS	VOCs	2-Chloroethyl vinyl ether	**214**	NA	70-130
MSV1030-BS	VOCs	Acrolein	**133**	2	70-130
MSV1030-BS	VOCs	2-Chloroethyl vinyl ether	**242**	11	70-130
OP36626-BS/BSD	SVOCs	Hexachlorocyclopentadiene	**30/34**	13	40-140/20
OP36626-BS/BSD	SVOCs	Hexachloroethane	45/56	**22**	40-140/20
OP36626-BS/BSD	SVOCs	Pyridine	**39**/44	**13**	40-140/20

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
MW2-ROX-012014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW2-ROX-012014	SVOCs	Pyridine	**UJ**
MW22-ROX-012014	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-012014	SVOCs	Pyridine	**UJ**
MW22-ROX-012014-Dup	SVOCs	Hexachlorocyclopentadiene	**UJ**
MW22-ROX-012014-Dup	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW22-ROX-012014	VOCs by 8011	Bromofluorobenzene	**279**	36-173
MW22-ROX-012014	VOCs by 8011	Bromofluorobenzene	**276**	36-173

Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

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
MW22-ROX-012014	VOCs	Tert butyl alcohol-d_9	**402772**	90102-360408
MW22-ROX-012014-Dup	VOCs	Tert butyl alcohol-d_9	**445898**	90102-360408

There were no target analytes associated with tert butyl alcohol-d_9; therefore, no qualification of data was required.

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
MW6A-ROX-011614	MW6A-ROX-011614-Dup

Were field duplicates within evaluation criteria?

Yes

11.0 Sample Dilutions

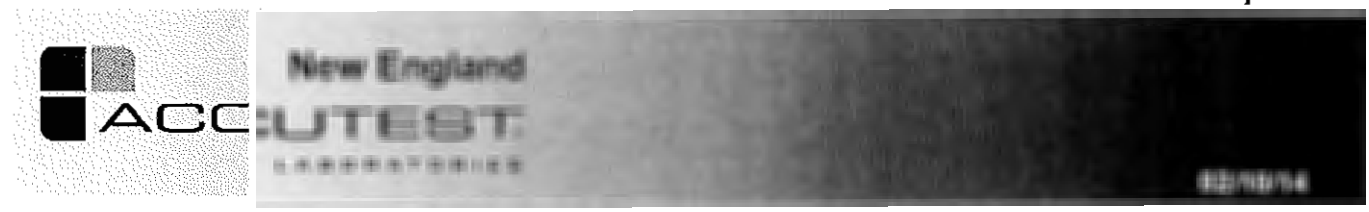
For samples that were diluted and nondetect, were undiluted results also reported?

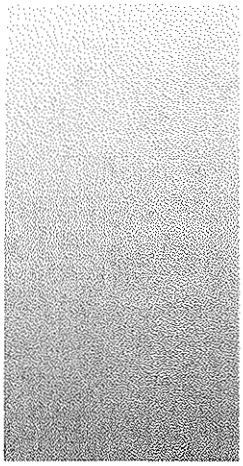
Not applicable; analytes were detected in samples that were diluted.

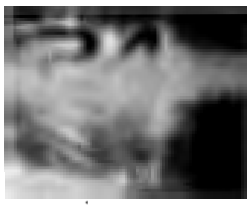
12.0 Additional Qualifications

Were additional qualifications applied?

No







Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27802

Sampling Date: 01/20/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **84**

Reviewed on 2/26/2014

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: MC27802

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27802-1	01/20/14	00:00	01/21/14	AQ	Ground Water	MW2-ROX-012014
MC27802-2	01/20/14	00:00	01/21/14	AQ	Ground Water	MW22-ROX-012014
MC27802-3	01/20/14	00:00	01/21/14	AQ	Ground Water	MW22-ROX-012014-DUP
MC27802-4	01/20/14	00:00	01/21/14	AQ	Trip Blank Water	TB-ROX-012014-HCL
MC27802-5	01/20/14	00:00	01/21/14	AQ	Trip Blank Water	TB-ROX-012014-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27802
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/4/2014 12:37:32 PM

3 Sample(s) and 2 Trip Blank(s) were collected on 01/20/2014 and were received at Accutest on 01/21/2014 properly preserved, at 1 Deg. C and intact. These Samples received an Accutest job number of MC27802. 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:** MSV1029

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27745-1MS, MC27745-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Benzene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MC27802-2, 3 for Tert Butyl Alcohol-D9: Outside control limits. Target analytes not associated with this internal standard.
- Continuing calibration standard MSV1029-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Matrix AQ **Batch ID:** MSV1030

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27830-1MS, MC27830-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Acrolein are outside control limits. Blank Spike meets program technical requirements.
- MC27830-1MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV1030-BS for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1030-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36626

- 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) MC27500-17MS, MC27500-17MSD were used as the QC samples indicated.
- OP36626-BS Recovery(s) for Hexachlorocyclopentadiene, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- OP36626-BSD Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, 2,4-Dinitrophenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dinitrophenol are outside control limits for sample OP36626-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- RPD of OP36626-BSD for Hexachloroethane: Outside control limits. Individual spike recoveries within acceptance limits.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36627

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-18MS, MC27500-18MSD were used as the QC samples indicated.
- Sample(s) MC27802-1, MC27802-2, MC27802-3 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: OP36632

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-19MS, MC27500-19MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MC27802-2 for Bromofluorobenzene (S): 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(MC27802).

Summary of Hits

Job Number: MC27802
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/20/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27802-1	MW2-ROX-012014					
Benzene		23.8	0.50	0.45	ug/l	SW846 8260C
n-Butylbenzene		25.4	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		9.6	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		1.5 J	5.0	0.87	ug/l	SW846 8260C
1,1-Dichloroethane		4.3	1.0	0.37	ug/l	SW846 8260C
Ethylbenzene		426	50	19	ug/l	SW846 8260C
Isopropylbenzene		102	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		10.6	5.0	0.55	ug/l	SW846 8260C
Naphthalene		66.3	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		133	5.0	0.59	ug/l	SW846 8260C
Toluene		9.9	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		264	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		156	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		486	1.0	0.70	ug/l	SW846 8260C
o-Xylene		30.4	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		516	1.0	0.41	ug/l	SW846 8260C
Acenaphthylene		0.18	0.11	0.053	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		9.4	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		20.8	0.21	0.079	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.043 JB~~ U	0.053	0.013	ug/l	SW846 8270D BY SIM
MC27802-2	MW22-ROX-012014					
Benzene		1470	25	23	ug/l	SW846 8260C
2-Butanone (MEK)		80.4	5.0	1.6	ug/l	SW846 8260C
n-Butylbenzene		35.7	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		12.8	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		14.7	5.0	0.87	ug/l	SW846 8260C
1,1-Dichloroethane		2.8	1.0	0.37	ug/l	SW846 8260C
Ethylbenzene		3170	50	19	ug/l	SW846 8260C
2-Hexanone		8.2	5.0	2.3	ug/l	SW846 8260C
Isopropylbenzene		169	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		9.4	5.0	0.55	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)		7.0	5.0	1.3	ug/l	SW846 8260C
Naphthalene		154 J	250	39	ug/l	SW846 8260C
n-Propylbenzene		287	5.0	0.59	ug/l	SW846 8260C
Toluene		5330	50	23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1300	250	23	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		298	250	54	ug/l	SW846 8260C
m,p-Xylene		5650	50	35	ug/l	SW846 8260C
o-Xylene		2650	50	20	ug/l	SW846 8260C
Xylene (total)		8290	50	20	ug/l	SW846 8260C
2,4-Dimethylphenol		39.9 J	53	6.1	ug/l	SW846 8270D

Summary of Hits

Job Number: MC27802
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/20/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
2-Methylphenol		12.4 J	53	6.8	ug/l	SW846 8270D
3&4-Methylphenol		31.3 J	53	11	ug/l	SW846 8270D
Phenol		7.1 J	27	2.7	ug/l	SW846 8270D
Acenaphthene		0.15	0.11	0.073	ug/l	SW846 8270D BY SIM
Fluorene		0.17	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		25.8	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		45.9	0.21	0.079	ug/l	SW846 8270D BY SIM
Phenanthrene		0.20 B	0.053	0.013	ug/l	SW846 8270D BY SIM
MC27802-3	MW22-ROX-012014-DUP					
Benzene		1580	25	23	ug/l	SW846 8260C
2-Butanone (MEK)		81.5	5.0	1.6	ug/l	SW846 8260C
n-Butylbenzene		35.5	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		12.7	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		14.6	5.0	0.87	ug/l	SW846 8260C
Ethylbenzene		3400	50	19	ug/l	SW846 8260C
2-Hexanone		8.8	5.0	2.3	ug/l	SW846 8260C
Isopropylbenzene		169	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		9.4	5.0	0.55	ug/l	SW846 8260C
4-Methyl-2-pentanone (MIBK)		7.0	5.0	1.3	ug/l	SW846 8260C
Naphthalene		161 J	250	39	ug/l	SW846 8260C
n-Propylbenzene		286	5.0	0.59	ug/l	SW846 8260C
Toluene		5710	50	23	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		1370	250	23	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		398	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		6010	50	35	ug/l	SW846 8260C
o-Xylene		2810	50	20	ug/l	SW846 8260C
Xylene (total)		8830	50	20	ug/l	SW846 8260C
2,4-Dimethylphenol		36.4 J	54	6.1	ug/l	SW846 8270D
2-Methylphenol		11.8 J	54	6.9	ug/l	SW846 8270D
3&4-Methylphenol		29.6 J	54	11	ug/l	SW846 8270D
Phenol		7.0 J	27	2.8	ug/l	SW846 8270D
Acenaphthene		0.14	0.11	0.074	ug/l	SW846 8270D BY SIM
Fluorene		0.15	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Metbylnaphthaleue		23.2	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methyluaphthalene		41.6	0.22	0.080	ug/l	SW846 8270D BY SIM
Phenanthrene		0.20 B	0.054	0.014	ug/l	SW846 8270D BY SIM
MC27802-4	TB-ROX-012014-HCL					
Acetone		6.4 J	10	2.8	ug/l	SW846 8260C

Summary of Hits

Job Number: MC27802
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/20/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27802-5	TB-ROX-012014-ST					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW2-ROX-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27293.D	1	01/23/14	AMY	n/a	n/a	MSV1030
Run #2	V27296.D	50	01/23/14	AMY	n/a	n/a	MSV1030

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	23.8	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	25.4	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	9.6	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	1.5	5.0	0.87	ug/l	J
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	4.3	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	426 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	102	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	10.6	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	66.3	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	133	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	9.9	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	264	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	156	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	486	1.0	0.70	ug/l	
95-47-6	o-Xylene	30.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	516	1.0	0.41	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:	MW2-ROX-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	95%	70-130%
2037-26-5	Toluene-D8	103%	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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:	MW2-ROX-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36756.D	1	01/28/14	KR	01/22/14	OP36626	MSR1354
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ng/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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:	MW2-ROX-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	44%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	80%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	65%		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 = Iudicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW2-ROX-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36725.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	0.18	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	9.4	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	20.8	0.21	0.079	ug/l	
85-01-8	Phenanthrene	~~0.043~~ J	0.053	0.013	ug/l	JB J
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	82%		30-130%
321-60-8	2-Fluorobiphenyl	66%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

ND = Nut 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-012014		
Lab Sample ID:	MC27802-1	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87727.D	1	01/23/14	CZ	01/23/14	OP36632	GYZ7477
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	146%		36-173%
460-00-4	Bromofluorobenzene (S)	153%		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:	MW22-ROX-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27264.D	1	01/22/14	AMY	n/a	n/a	MSV1029
Run #2	V27297.D	50	01/23/14	AMY	n/a	n/a	MSV1030

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1470 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	80.4	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	35.7	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	12.8	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	14.7	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	2.8	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3170 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	8.2	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	169	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	9.4	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	7.0	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	154 [a]	250	39	ug/l	J
103-65-1	n-Propylbenzene	287	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	5330 [a]	50	23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1300 [a]	250	23	ug/l	
108-67-8	1,3,5-Trimethylbenzene	298 [a]	250	54	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	5650 [a]	50	35	ug/l	
95-47-6	o-Xylene	2650 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	8290 [a]	50	20	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-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%	97%	70-130%
2037-26-5	Toluene-D8	93%	98%	70-130%
460-00-4	4-Bromofluorobenzene	106%	104%	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:	MW22-ROX-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36757.D	5	01/28/14	KR	01/22/14	OP36626	MSR1354
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	53	6.6	ug/l	
95-57-8	2-Chlorophenol	ND	27	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	53	2.6	ug/l	
120-83-2	2,4-Dichlorophenol	ND	53	1.7	ug/l	
105-67-9	2,4-Dimethylphenol	39.9	53	6.1	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	110	13	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	53	6.4	ug/l	
95-48-7	2-Methylphenol	12.4	53	6.8	ug/l	J
	3&4-Methylphenol	31.3	53	11	ug/l	J
88-75-5	2-Nitrophenol	ND	53	2.7	ug/l	
100-02-7	4-Nitrophenol	ND	110	3.1	ug/l	
87-86-5	Pentachlorophenol	ND	53	6.6	ug/l	
108-95-2	Phenol	7.1	27	2.7	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	53	3.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	53	1.7	ug/l	
62-53-3	Aniline	ND	53	3.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	27	1.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	27	4.5	ug/l	
100-51-6	Benzyl Alcohol	ND	53	3.1	ug/l	
91-58-7	2-Chloronaphthalene	ND	27	4.9	ug/l	
106-47-8	4-Chloroaniline	ND	53	1.3	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	27	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	27	1.2	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	27	0.71	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	27	1.1	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	27	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	53	3.6	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	53	3.4	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	27	2.7	ug/l	
132-64-9	Dibenzofuran	ND	11	0.83	ug/l	
84-74-2	Di-n-butyl phthalate	ND	27	2.1	ug/l	
117-84-0	Di-n-octyl phthalate	ND	27	2.3	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-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	27	2.7	ug/l	
131-11-3	Dimethyl phthalate	ND	27	2.7	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	11	2.6	ug/l	
118-74-1	Hexachlorobenzene	ND	27	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	53	13	ug/l	UJ
67-72-1	Hexachloroethane	ND	27	2.3	ug/l	
78-59-1	Isophorone	ND	27	1.1	ug/l	
88-74-4	2-Nitroaniline	ND	53	1.5	ug/l	
99-09-2	3-Nitroaniline	ND	53	2.7	ug/l	
100-01-6	4-Nitroaniline	ND	53	23	ug/l	
98-95-3	Nitrobenzene	ND	27	1.3	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	27	2.7	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	27	4.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	27	2.9	ug/l	
110-86-1	Pyridine	ND	53	2.7	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	56%		15-110%
4165-62-2	Phenol-d5	29%		15-110%
118-79-6	2,4,6-Trihromophenol	74%		15-110%
4165-60-0	Nitrobenzene-d5	85%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	83%		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-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36726.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
Run #2							

	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.15	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	0.17	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	25.8	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	45.9	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.20	0.053	0.013	ug/l	B
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	91%		30-130%
321-60-8	2-Fluorobiphenyl	74%		30-130%
1718-51-0	Terphenyl-d14	89%		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:	MW22-ROX-012014		
Lab Sample ID:	MC27802-2	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87728.D	1	01/23/14	CZ	01/23/14	OP36632	GYZ7477
Run #2							

	Initial Volume	Final Volume
Run #1	34.8 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	0.0055	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	279% [a]		36-173%
460-00-4	Bromofluorobenzene (S)	276% [a]		36-173%

(a) Outside control limits due to possible matrix interference.

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-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27265.D	1	01/22/14	AMY	n/a	n/a	MSV1029
Run #2	V27298.D	50	01/23/14	AMY	n/a	n/a	MSV1030

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1580 [a]	25	23	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	81.5	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	35.5	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	12.7	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	14.6	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	3400 [a]	50	19	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	8.8	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	169	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	9.4	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	7.0	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	161 [a]	250	39	ug/l	J
103-65-1	n-Propylbenzene	286	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	5710 [a]	50	23	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1370 [a]	250	23	ug/l	
108-67-8	1,3,5-Trimethylbenzene	398	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	6010 [a]	50	35	ug/l	
95-47-6	o-Xylene	2810 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	8830 [a]	50	20	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-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%	96%	70-130%
2037-26-5	Toluene-D8	93%	99%	70-130%
460-00-4	4-Bromofluorobenzene	106%	105%	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:	MW22-ROX-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36758.D	5	01/28/14	KR	01/22/14	OP36626	MSR1354
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	54	6.7	ug/l	
95-57-8	2-Chlorophenol	ND	27	2.1	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	54	2.6	ug/l	
120-83-2	2,4-Dichlorophenol	ND	54	1.8	ug/l	
105-67-9	2,4-Dimethylphenol	36.4	54	6.1	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	110	13	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	54	6.4	ug/l	
95-48-7	2-Methylphenol	11.8	54	6.9	ug/l	J
	3&4-Methylphenol	29.6	54	11	ug/l	J
88-75-5	2-Nitrophenol	ND	54	2.7	ug/l	
100-02-7	4-Nitrophenol	ND	110	3.1	ug/l	
87-86-5	Pentachlorophenol	ND	54	6.7	ug/l	
108-95-2	Phenol	7.0	27	2.8	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	54	3.1	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	54	1.7	ug/l	
62-53-3	Aniline	ND	54	3.4	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	27	1.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	27	4.6	ug/l	
100-51-6	Benzyl Alcohol	ND	54	3.1	ug/l	
91-58-7	2-Chloronaphthalene	ND	27	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	54	1.3	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	27	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	27	1.2	ng/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	27	0.72	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	27	1.1	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	27	3.5	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	54	3.6	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	54	3.4	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	27	2.7	ug/l	
132-64-9	Dibenzofuran	ND	11	0.84	ug/l	
84-74-2	Di-n-butyl phthalate	ND	27	2.1	ug/l	
117-84-0	Di-n-octyl phthalate	ND	27	2.3	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-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	27	2.7	ug/l	
131-11-3	Dimethyl phthalate	ND	27	2.7	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	11	2.6	ug/l	
118-74-1	Hexachlorobenzene	ND	27	1.6	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	54	13	ug/l	UJ
67-72-1	Hexachloroethane	ND	27	2.4	ug/l	
78-59-1	Isophorone	ND	27	1.1	ug/l	
88-74-4	2-Nitroaniline	ND	54	1.5	ug/l	
99-09-2	3-Nitroaniline	ND	54	2.7	ug/l	
100-01-6	4-Nitroaniline	ND	54	23	ug/l	
98-95-3	Nitrobenzene	ND	27	1.3	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	27	2.7	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	27	4.3	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	27	2.9	ug/l	
110-86-1	Pyridine	ND	54	2.8	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	27%		15-110%
118-79-6	2,4,6-Tribromophenol	71%		15-110%
4165-60-0	Nitrobenzene-d5	80%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	80%		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-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36727.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
Run #2							

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.14	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	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	0.15	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	23.2	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	41.6	0.22	0.080	ug/l	
85-01-8	Phenanthrene	0.20	0.054	0.014	ug/l	B
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	82%		30-130%
321-60-8	2-Fluorobiphenyl	66%		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:	MW22-ROX-012014-DUP		
Lab Sample ID:	MC27802-3	Date Sampled:	01/20/14
Matrix:	AQ - Ground Water	Date Received:	01/21/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87729.D	1	01/23/14	CZ	01/23/14	OP36632	GYZ7477
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	137%		36-173%
460-00-4	Bromofluorobenzene (S)	161%		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-012014-HCL		
Lab Sample ID:	MC27802-4	Date Sampled:	01/20/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27255.D	1	01/22/14	AMY	n/a	n/a	MSV1029
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	6.4	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethaue	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012014-HCL		
Lab Sample ID:	MC27802-4	Date Sampled:	01/20/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ng/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorohutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calihration range
J = Indicates 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-012014-HCL		
Lab Sample ID:	MC27802-4	Date Sampled:	01/20/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/21/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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-012014-ST		
Lab Sample ID:	MC27802-5	Date Sampled:	01/20/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/21/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ87730.D	1	01/23/14	CZ	01/23/14	OP36632	GYZ7477
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 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	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	87%		36-173%
460-00-4	Bromofluorobenzene (S)	87%		36-173%

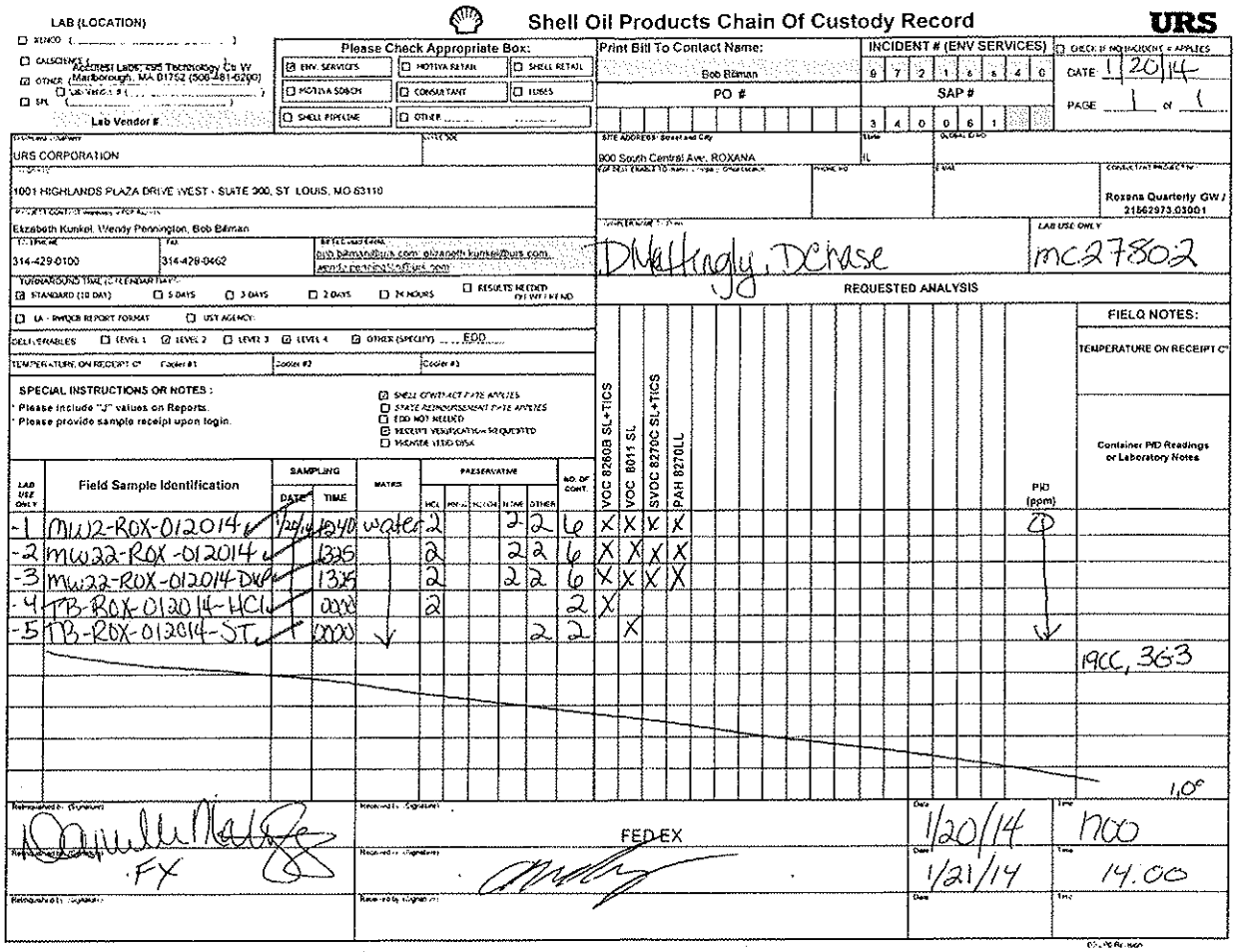
ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibratiou range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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 (_____)
☑ OTHER (Accutest Labs; 495 Technology Ctr W (Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Please Check Appropriate Box:
☑ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SOBRO | ☐ CONSULTANT | ☐ LUSTIS
☐ SHELL PIPELINE | ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #
INCIDENT # (ENV SERVICES): 0 7 2 1 5 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF HOLIDAY/WEEKEND APPLIES
DATE 1/20/14
PAGE 1 of 1

URS CORPORATION
1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
Elizabeth Kunkel, Wendy Pennington, Bob Billman
314-429-0100 | 314-429-0462
bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA
State: IL
Global ID #:
PHONE NO:
E-MAIL:
CONSULTANT PROJECT #: Roxana Quarterly GW / 21562973.03001

D.Mattingly, D.Chase

LAB USE ONLY: mc27802

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (10 DAYS) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (SURCHARGE APPLIES)

☐ 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
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ MONITOR VIOD 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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW2-ROX-012014	1/20/14	1040	water	2			2	2	6	X	X	X	X		
-2	MW22-ROX-012014		1335		2			2	2	6	X	X	X	X		
-3	MW22-ROX-012014-DUP		1335		2			2	2	6	X	X	X	X		
-4	TB-ROX-012014-HCL		0000		2					2	X					
-5	TB-ROX-012014-ST		0000						2	2		X				

FIELD NOTES:
TEMPERATURE ON RECEIPT C°: 1.0°
19CC, 363

Relinquished (Signature)	Received (Signature)	Date	Time
FX	FED-EX	1/20/14	1700
		1/21/14	14.00

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MC27802: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27802 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/21/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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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MC27802: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27802

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27802-1 Collected: 20-JAN-14 00:00 By: MW2-ROX-012014			Received: 21-JAN-14 By:			
MC27802-1	SW846 8011	23-JAN-14 15:50	CZ	23-JAN-14	AJ	V8011SL
MC27802-1	SW846 8260C	23-JAN-14 19:29	AMY			V8260SL+
MC27802-1	SW846 8260C	23-JAN-14 20:49	AMY			V8260SL+
MC27802-1	SW846 8270D BY SIM	27-JAN-14 13:51	KR	22-JAN-14	PA	B8270SIMPAH
MC27802-1	SW846 8270D	28-JAN-14 01:39	KR	22-JAN-14	PA	AB8270SL+
MC27802-2 Collected: 20-JAN-14 00:00 By: MW22-ROX-012014			Received: 21-JAN-14 By:			
MC27802-2	SW846 8260C	22-JAN-14 16:42	AMY			V8260SL+
MC27802-2	SW846 8011	23-JAN-14 16:15	CZ	23-JAN-14	AJ	V8011SL
MC27802-2	SW846 8260C	23-JAN-14 21:15	AMY			V8260SL+
MC27802-2	SW846 8270D BY SIM	27-JAN-14 14:14	KR	22-JAN-14	PA	B8270SIMPAH
MC27802-2	SW846 8270D	28-JAN-14 02:02	KR	22-JAN-14	PA	AB8270SL+
MC27802-3 Collected: 20-JAN-14 00:00 By: MW22-ROX-012014-DUP			Received: 21-JAN-14 By:			
MC27802-3	SW846 8260C	22-JAN-14 17:08	AMY			V8260SL+
MC27802-3	SW846 8011	23-JAN-14 16:40	CZ	23-JAN-14	AJ	V8011SL
MC27802-3	SW846 8260C	23-JAN-14 21:42	AMY			V8260SL+
MC27802-3	SW846 8270D BY SIM	27-JAN-14 14:37	KR	22-JAN-14	PA	B8270SIMPAH
MC27802-3	SW846 8270D	28-JAN-14 02:25	KR	22-JAN-14	PA	AB8270SL+
MC27802-4 Collected: 20-JAN-14 00:00 By: TB-ROX-012014-HCL			Received: 21-JAN-14 By:			
MC27802-4	SW846 8260C	22-JAN-14 12:44	AMY			V8260SL+
MC27802-5 Collected: 20-JAN-14 00:00 By: TB-ROX-012014-ST			Received: 21-JAN-14 By:			
MC27802-5	SW846 8011	23-JAN-14 17:07	CZ	23-JAN-14	AJ	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/21/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27802-1.2	Walk In Ref #22	Michael DiBuono	01/22/14 14:22	Retrieve from Storage
MC27802-1.4	VOC Ref #3	Marc Tahtamoni	01/22/14 14:11	Retrieve from Storage
MC27802-1.5	VOC Ref #3	Amy Min Yang	01/23/14 16:24	Retrieve from Storage
MC27802-1.5	Amy Min Yang	GCMSV	01/23/14 16:24	Load on Instrument
MC27802-1.5	GCMSV	Amy Min Yang	01/24/14 09:51	Unload from Instrument
MC27802-1.5	Amy Min Yang	VOC Ref #3	01/24/14 09:51	Return to Storage
MC27802-1.6	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27802-1.6	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27802-1.6	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27802-1.6	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27802-2.1	Walk In Ref #22	Michael DiBuono	01/22/14 14:22	Retrieve from Storage
MC27802-2.4	VOC Ref #3	Marc Tahtamoni	01/22/14 14:11	Retrieve from Storage
MC27802-2.5	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27802-2.5	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27802-2.5	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27802-2.5	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27802-2.6	VOC Ref #3	Amy Min Yang	01/23/14 16:24	Retrieve from Storage
MC27802-2.6	Amy Min Yang	GCMSV	01/23/14 16:24	Load on Instrument
MC27802-2.6	GCMSV	Amy Min Yang	01/24/14 09:51	Unload from Instrument
MC27802-2.6	Amy Min Yang	VOC Ref #3	01/24/14 09:51	Return to Storage
MC27802-3.2	Walk In Ref #22	Michael DiBnono	01/22/14 14:22	Retrieve from Storage
MC27802-3.4	VOC Ref #3	Marc Tahtamoni	01/22/14 14:11	Retrieve from Storage
MC27802-3.5	VOC Ref #3	Amy Min Yang	01/23/14 16:24	Retrieve from Storage
MC27802-3.5	Amy Min Yang	GCMSV	01/23/14 16:24	Load on Instrument
MC27802-3.5	GCMSV	Amy Min Yang	01/24/14 09:51	Unload from Instrument
MC27802-3.5	Amy Min Yang	VOC Ref #3	01/24/14 09:51	Return to Storage
MC27802-3.6	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27802-3.6	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument
MC27802-3.6	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27802-3.6	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27802-4.1	VOC Ref #3	Amy Min Yang	01/22/14 10:47	Retrieve from Storage
MC27802-4.1	Amy Min Yang	GCMSV	01/22/14 10:47	Load on Instrument

5.3

Accutest Internal Chain of Custody

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL
Received: 01/21/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27802-4.1	GCMSV	Amy Min Yang	01/23/14 16:00	Unload from Instrument
MC27802-4.1	Amy Min Yang	VOC Ref #3	01/23/14 16:00	Return to Storage
MC27802-5.1	VOC Ref #3	Marc Tahtamoni	01/22/14 14:11	Retrieve from Storage

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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Tricblorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbeuzeue	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-MB	V27251.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	98%	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

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-MB	V27287.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-MB	V27287.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-MB	V27287.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	97%	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	

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	47.7	95	70-130
107-02-8	Acrolein	50	78.7	157* [a]	70-130
107-13-1	Acrylonitrile	100	101	101	70-130
71-43-2	Benzene	50	53.9	108	70-130
108-86-1	Bromobenzene	50	54.4	109	70-130
74-97-5	Bromochloromethane	50	53.1	106	70-130
75-27-4	Bromodichloromethane	50	57.7	115	70-130
75-25-2	Bromoform	50	45.6	91	70-130
74-83-9	Bromomethane	50	49.3	99	70-130
78-93-3	2-Butanone (MEK)	50	47.8	96	70-130
104-51-8	n-Butylbenzene	50	58.2	116	70-130
135-98-8	sec-Butylbenzene	50	59.8	120	70-130
98-06-6	tert-Butylbenzene	50	59.9	120	70-130
75-15-0	Carbon disulfide	50	47.8	96	70-130
56-23-5	Carbon tetrachloride	50	60.7	121	70-130
108-90-7	Chlorobenzene	50	47.9	96	70-130
75-00-3	Chloroethane	50	59.0	118	70-130
110-75-8	2-Chloroethyl vinyl ether	50	107	214* [a]	70-130
67-66-3	Chloroform	50	51.5	103	70-130
74-87-3	Chloromethane	50	48.0	96	70-130
95-49-8	o-Chlorotoluene	50	53.9	108	70-130
106-43-4	p-Chlorotoluene	50	54.9	110	70-130
124-48-1	Dibromochloromethane	50	58.7	117	70-130
95-50-1	1,2-Dichlorobenzene	50	50.0	100	70-130
541-73-1	1,3-Dichlorobenzene	50	51.0	102	70-130
106-46-7	1,4-Dichlorobenzene	50	50.7	101	70-130
75-71-8	Dichlorodifluoromethane	50	54.0	108	70-130
75-34-3	1,1-Dichloroethane	50	53.5	107	70-130
107-06-2	1,2-Dichloroethane	50	54.0	108	70-130
75-35-4	1,1-Dichloroethene	50	54.9	110	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.5	107	70-130
156-60-5	trans-1,2-Dichloroethene	50	53.1	106	70-130
78-87-5	1,2-Dichloropropane	50	52.2	104	70-130
142-28-9	1,3-Dichloropropane	50	51.8	104	70-130
594-20-7	2,2-Dichloropropane	50	63.6	127	70-130
563-58-6	1,1-Dichloropropene	50	54.9	110	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	50.2	100	70-130
10061-02-6	trans-1,3-Dichloropropene	50	52.2	104	70-130
123-91-1	1,4-Dioxane	250	232	93	70-130
97-63-2	Ethyl methacrylate	50	48.9	98	77-137
100-41-4	Ethylbenzene	50	55.1	110	70-130
87-68-3	Hexachlorobutadiene	50	60.3	121	70-130
591-78-6	2-Hexanone	50	46.6	93	70-130
98-82-8	Isopropylbenzene	50	60.7	121	70-130
99-87-6	p-Isopropyltoluene	50	58.0	116	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.5	113	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.6	107	70-130
74-95-3	Methylene bromide	50	52.6	105	70-130
75-09-2	Methylene chloride	50	49.4	99	70-130
91-20-3	Naphthaleue	50	53.0	106	70-130
103-65-1	n-Propylbenzene	50	57.6	115	70-130
100-42-5	Styrene	50	50.9	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	55.0	110	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	51.0	102	70-130
127-18-4	Tetrachloroethene	50	56.4	113	70-130
108-88-3	Toluene	50	56.9	114	70-130
87-61-6	1,2,3-Trichlorobenzene	50	59.1	118	70-130
120-82-1	1,2,4-Trichlorobenzene	50	61.9	124	70-130
71-55-6	1,1,1-Trichloroethane	50	59.1	118	70-130
79-00-5	1,1,2-Trichloroethane	50	51.6	103	70-130
79-01-6	Trichloroethene	50	55.9	112	70-130
75-69-4	Trichlorofluoromethane	50	60.7	121	70-130
96-18-4	1,2,3-Trichloropropane	50	54.9	110	70-130
95-63-6	1,2,4-Trimethylbenzene	50	58.5	117	70-130
108-67-8	1,3,5-Trimethylbenzene	50	59.7	119	70-130
108-05-4	Vinyl Acetate	50	53.5	107	70-130
75-01-4	Vinyl chloride	50	47.1	94	70-130
	m,p-Xylene	100	92.4	92	70-130
95-47-6	o-Xylene	50	46.3	93	70-130
1330-20-7	Xylene (total)	150	139	93	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1029-BS	V27247.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

6.2.1

6

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-BS	V27284.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	53.9	108	70-130
107-02-8	Acrolein	50	66.6	133* [a]	70-130
107-13-1	Acrylonitrile	100	91.5	92	70-130
71-43-2	Benzene	50	48.6	97	70-130
108-86-1	Bromobenzene	50	49.9	100	70-130
74-97-5	Bromochloromethane	50	48.0	96	70-130
75-27-4	Bromodichloromethane	50	50.7	101	70-130
75-25-2	Bromoform	50	37.9	76	70-130
74-83-9	Bromomethane	50	48.2	96	70-130
78-93-3	2-Butanone (MEK)	50	47.8	96	70-130
104-51-8	n-Butylbenzene	50	52.8	106	70-130
135-98-8	sec-Butylbenzene	50	54.2	108	70-130
98-06-6	tert-Butylbenzene	50	53.7	107	70-130
75-15-0	Carbon disulfide	50	41.8	84	70-130
56-23-5	Carbon tetrachloride	50	51.9	104	70-130
108-90-7	Chlorobenzene	50	42.2	84	70-130
75-00-3	Chloroethane	50	57.0	114	70-130
110-75-8	2-Chloroethyl vinyl ether	50	121	242* [b]	70-130
67-66-3	Chloroform	50	46.4	93	70-130
74-87-3	Chloromethane	50	46.9	94	70-130
95-49-8	o-Chlorotoluene	50	49.5	99	70-130
106-43-4	p-Chlorotoluene	50	50.2	100	70-130
124-48-1	Dibromochloromethane	50	49.8	100	70-130
95-50-1	1,2-Dichlorobenzene	50	44.9	90	70-130
541-73-1	1,3-Dichlorobenzene	50	46.5	93	70-130
106-46-7	1,4-Dichlorobenzene	50	45.8	92	70-130
75-71-8	Dichlorodifluoromethane	50	49.9	100	70-130
75-34-3	1,1-Dichloroethane	50	48.6	97	70-130
107-06-2	1,2-Dichloroethane	50	47.0	94	70-130
75-35-4	1,1-Dichloroethene	50	50.0	100	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.8	98	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.2	96	70-130
78-87-5	1,2-Dichloropropane	50	46.9	94	70-130
142-28-9	1,3-Dichloropropane	50	45.3	91	70-130
594-20-7	2,2-Dichloropropane	50	56.1	112	70-130
563-58-6	1,1-Dichloropropene	50	48.7	97	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-BS	V27284.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	44.9	90	70-130
10061-02-6	trans-1,3-Dichloropropene	50	46.2	92	70-130
123-91-1	1,4-Dioxane	250	202	81	70-130
97-63-2	Ethyl methacrylate	50	42.6	85	77-137
100-41-4	Ethylbenzene	50	48.0	96	70-130
87-68-3	Hexachlorobutadiene	50	53.3	107	70-130
591-78-6	2-Hexanone	50	47.2	94	70-130
98-82-8	Isopropylbenzene	50	55.4	111	70-130
99-87-6	p-Isopropyltoluene	50	52.4	105	70-130
1634-04-4	Methyl Tert Butyl Ether	50	50.8	102	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	45.9	92	70-130
74-95-3	Methylene bromide	50	46.3	93	70-130
75-09-2	Methylene chloride	50	45.0	90	70-130
91-20-3	Naphthalene	50	44.9	90	70-130
103-65-1	n-Propylbenzene	50	52.4	105	70-130
100-42-5	Styrene	50	44.4	89	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	47.8	96	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	45.4	91	70-130
127-18-4	Tetrachloroethene	50	48.5	97	70-130
108-88-3	Toluene	50	50.8	102	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.4	105	70-130
120-82-1	1,2,4-Trichlorobenzene	50	55.1	110	70-130
71-55-6	1,1,1-Trichloroethane	50	51.3	103	70-130
79-00-5	1,1,2-Trichloroethane	50	46.0	92	70-130
79-01-6	Trichloroethene	50	49.5	99	70-130
75-69-4	Trichlorofluoromethane	50	56.0	112	70-130
96-18-4	1,2,3-Trichloropropane	50	48.4	97	70-130
95-63-6	1,2,4-Trimethylbenzene	50	53.1	106	70-130
108-67-8	1,3,5-Trimethylbenzene	50	54.4	109	70-130
108-05-4	Vinyl Acetate	50	47.8	96	70-130
75-01-4	Vinyl chloride	50	45.3	91	70-130
	m,p-Xylene	100	81.3	81	70-130
95-47-6	o-Xylene	50	41.2	82	70-130
1330-20-7	Xylene (total)	150	122	81	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1030-BS	V27284.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	102%	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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	MC27745-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	150	60* [a]	160	64* [a]	6	70-130/30
107-02-8	Acrolein	ND		250	322	129	328	131* [a]	2	70-130/30
107-13-1	Acrylonitrile	ND		500	506	101	507	101	0	70-130/30
71-43-2	Benzene	ND		250	331	132* [a]	306	122	8	70-130/30
108-86-1	Bromobenzene	ND		250	282	113	276	110	2	70-130/30
74-97-5	Bromochloromethane	ND		250	264	106	264	106	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	258	103	258	103	0	70-130/30
75-25-2	Bromoform	ND		250	215	86	216	86	0	70-130/30
74-83-9	Bromomethane	ND		250	201	80	200	80	0	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	189	76	192	77	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	282	113	288	115	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	299	120	297	119	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	284	114	281	112	1	70-130/30
75-15-0	Carbon disulfide	ND		250	239	96	243	97	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	250	100	255	102	2	70-130/30
108-90-7	Chlorobenzene	ND		250	233	93	235	94	1	70-130/30
75-00-3	Chloroethane	ND		250	239	96	239	96	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	240	96	241	96	0	70-130/30
74-87-3	Chloromethane	ND		250	195	78	192	77	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	269	108	267	107	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	272	109	269	108	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	274	110	276	110	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	251	100	249	100	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	257	103	255	102	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	253	101	250	100	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	228	91	230	92	1	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	257	103	258	103	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	229	92	228	91	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	279	112	279	112	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	275	110	274	110	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	266	106	272	109	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	253	101	254	102	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	259	104	256	102	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	287	115	292	117	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	254	102	260	104	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Compound	MC27745-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	240	96	240	96	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	248	99	250	100	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1240	99	1360	109	9	70-130/30
97-63-2	Ethyl methacrylate	ND		250	249	100	250	100	0	72-139/30
100-41-4	Ethylbenzene	ND		250	269	108	271	108	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	275	110	285	114	4	70-130/30
591-78-6	2-Hexanone	ND		250	198	79	198	79	0	70-130/30
98-82-8	Isopropylbenzene	ND		250	311	124	306	122	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	288	115	287	115	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	0.61	J	250	301	120	300	120	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	268	107	275	110	3	70-130/30
74-95-3	Methylene bromide	ND		250	245	98	244	98	0	70-130/30
75-09-2	Methylene chloride	ND		250	250	100	251	100	0	70-130/30
91-20-3	Naphthalene	ND		250	262	105	294	118	12	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	287	115	1	70-130/30
100-42-5	Styrene	ND		250	252	101	252	101	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	258	103	258	103	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	273	109	275	110	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	264	106	269	108	2	70-130/30
108-88-3	Toluene	ND		250	279	112	281	112	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	281	112	308	123	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	299	120	313	125	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	267	107	269	108	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	255	102	257	103	1	70-130/30
79-01-6	Trichloroethene	ND		250	263	105	266	106	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	222	89	221	88	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	277	111	278	111	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	293	117	291	116	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	300	120	297	119	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	254	102	255	102	0	70-130/30
75-01-4	Vinyl chloride	ND		250	191	76	191	76	0	70-130/30
	m,p-Xylene	ND		500	456	91	455	91	0	70-130/30
95-47-6	o-Xylene	ND		250	230	92	231	92	0	70-130/30
1330-20-7	Xylene (total)	ND		750	686	91	686	91	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27745-1MS	V27271.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1MSD	V27272.D	5	01/22/14	AMY	n/a	n/a	MSV1029
MC27745-1	V27256.D	1	01/22/14	AMY	n/a	n/a	MSV1029

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

MC27802-2, MC27802-3, MC27802-4

CAS No.	Surrogate Recoveries	MS	MSD	MC27745-1	Limits
1868-53-7	Dibromofluoromethane	92%	93%	110%	70-130%
2037-26-5	Toluene-D8	98%	98%	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	103%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27830-1MS	V27294.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1MSD	V27295.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1	V27290.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	MC27830-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	152	61* [a]	161	64* [a]	6	70-130/30
107-02-8	Acrolein	ND		250	345	138* [a]	352	141* [a]	2	70-130/30
107-13-1	Acrylonitrile	ND		500	516	103	522	104	1	70-130/30
71-43-2	Benzene	ND		250	270	108	264	106	2	70-130/30
108-86-1	Bromobenzene	ND		250	273	109	275	110	1	70-130/30
74-97-5	Bromochloromethane	ND		250	261	104	266	106	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	277	111	273	109	1	70-130/30
75-25-2	Bromoform	ND		250	217	87	216	86	0	70-130/30
74-83-9	Bromomethane	ND		250	253	101	250	100	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	190	76	185	74	3	70-130/30
104-51-8	n-Butylbenzene	ND		250	290	116	287	115	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	297	119	297	119	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	292	117	292	117	0	70-130/30
75-15-0	Carbon disulfide	ND		250	229	92	232	93	1	70-130/30
56-23-5	Carbon tetrachloride	ND		250	286	114	277	111	3	70-130/30
108-90-7	Chlorobenzene	ND		250	235	94	230	92	2	70-130/30
75-00-3	Chloroethane	ND		250	305	122	300	120	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	256	102	253	101	1	70-130/30
74-87-3	Chloromethane	ND		250	256	102	272	109	6	70-130/30
95-49-8	o-Chlorotoluene	ND		250	270	108	269	108	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	274	110	273	109	0	70-130/30
124-48-1	Dibromochloromethane	ND		250	280	112	282	113	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	245	98	248	99	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	252	101	254	102	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	248	99	250	100	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	269	108	274	110	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	268	107	267	107	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	263	105	255	102	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	274	110	270	108	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	15.9		250	283	107	284	107	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	266	106	265	106	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	260	104	257	103	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	256	102	254	102	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	306	122	299	120	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	272	109	267	107	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27830-1MS	V27294.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1MSD	V27295.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1	V27290.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	MC27830-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	241	96	238	95	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	257	103	252	101	2	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1190	95	1210	97	2	70-130/30
97-63-2	Ethyl methacrylate	ND		250	244	98	243	97	0	72-139/30
100-41-4	Ethylbenzene	ND		250	274	110	267	107	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	288	115	296	118	3	70-130/30
591-78-6	2-Hexanone	ND		250	193	77	193	77	0	70-130/30
98-82-8	Isopropylbenzene	ND		250	307	123	306	122	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	286	114	289	116	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	288	115	285	114	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	269	108	269	108	0	70-130/30
74-95-3	Methylene bromide	ND		250	259	104	253	101	2	70-130/30
75-09-2	Methylene chloride	ND		250	246	98	247	99	0	70-130/30
91-20-3	Naphthalene	ND		250	284	114	283	113	0	70-130/30
103-65-1	n-Propylbenzene	ND		250	292	117	288	115	1	70-130/30
100-42-5	Styrene	ND		250	247	99	244	98	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	266	106	265	106	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	259	104	263	105	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	268	107	267	107	0	70-130/30
108-88-3	Toluene	ND		250	281	112	275	110	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	275	110	302	121	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	300	120	311	124	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	289	116	285	114	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	259	104	257	103	1	70-130/30
79-01-6	Trichloroethene	ND		250	276	110	270	108	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	294	118	290	116	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	274	110	280	112	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	294	118	294	118	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	304	122	298	119	2	70-130/30
108-05-4	Vinyl Acetate	ND		250	266	106	267	107	0	70-130/30
75-01-4	Vinyl chloride	ND		250	248	99	240	96	3	70-130/30
	m,p-Xylene	ND		500	452	90	443	89	2	70-130/30
95-47-6	o-Xylene	ND		250	227	91	223	89	2	70-130/30
1330-20-7	Xylene (total)	ND		750	679	91	666	89	2	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27830-1MS	V27294.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1MSD	V27295.D	5	01/23/14	AMY	n/a	n/a	MSV1030
MC27830-1	V27290.D	1	01/23/14	AMY	n/a	n/a	MSV1030

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

MC27802-1, MC27802-2, MC27802-3

CAS No.	Surrogate Recoveries	MS	MSD	MC27830-1	Limits
1868-53-7	Dibromofluoromethane	95%	97%	104%	70-130%
2037-26-5	Toluene-D8	98%	99%	97%	70-130%
460-00-4	4-Bromofluorobenzene	101%	102%	106%	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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1029-CC1019	Injection Date:	01/22/14
Lab File ID:	V27246.D	Injection Time:	08:45
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	605724	6.58	757292	7.76	419514	11.09	462866	13.30	180204	3.53
Upper Limit [a]	1211448	7.08	1514584	8.26	839028	11.59	925732	13.80	360408	4.03
Lower Limit [b]	302862	6.08	378646	7.26	209757	10.59	231433	12.80	90102	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
MSV1029-BS	564468	6.59	706762	7.76	384886	11.09	423775	13.30	173285	3.53
MSV1029-MB	468505	6.59	627027	7.76	348216	11.09	337826	13.30	158527	3.53
ZZZZZZ	446169	6.59	600590	7.77	335786	11.09	326846	13.30	147976	3.54
ZZZZZZ	431598	6.59	583326	7.77	329953	11.09	318171	13.30	148834	3.54
ZZZZZZ	428462	6.59	581210	7.77	329142	11.09	318632	13.30	149805	3.54
MC27802-4	414949	6.60	558604	7.77	316631	11.09	305478	13.30	145071	3.54
MC27745-1	406377	6.59	557257	7.77	310309	11.09	304354	13.30	152261	3.53
ZZZZZZ	401109	6.59	549187	7.77	311970	11.09	299911	13.30	155790	3.53
ZZZZZZ	393741	6.59	535774	7.76	305510	11.09	294098	13.30	152680	3.53
ZZZZZZ	388659	6.59	530266	7.76	300650	11.09	291627	13.30	146580	3.53
ZZZZZZ	392234	6.59	528985	7.77	304146	11.09	308199	13.30	157525	3.54
ZZZZZZ	411592	6.59	553113	7.76	317236	11.09	320141	13.30	163873	3.54
ZZZZZZ	466570	6.59	577420	7.77	326056	11.09	315868	13.30	180986	3.54
MC27802-2	694621	6.59	934560	7.77	516679	11.09	625001	13.30	402772[c]	3.54
MC27802-3	756376	6.59	1025515	7.77	544213	11.09	660731	13.30	445898[c]	3.56
ZZZZZZ	614185	6.71	1184622	7.81	468431	11.09	432420	13.30	254280	3.54
ZZZZZZ	630576	6.58	909912	7.76	445841	11.09	432739	13.30	240206	3.53
ZZZZZZ	632396	6.58	907679	7.76	446914	11.09	434700	13.30	240743	3.53
MC27745-1MS	664916	6.58	865058	7.76	460540	11.09	478133	13.30	240896	3.53
MC27745-1MSD	684870	6.58	887114	7.76	474551	11.09	500960	13.30	262194	3.53

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzeue-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 Internal Standard Area Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1030-CC1019	Injection Date:	01/23/14
Lab File ID:	V27284.D	Injection Time:	15:24
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	555218	6.56	705116	7.74	390526	11.08	407991	13.29	158740	3.51
Upper Limit [a]	1110436	7.06	1410232	8.24	781052	11.58	815982	13.79	317480	4.01
Lower Limit [b]	277609	6.06	352558	7.24	195263	10.58	203996	12.79	79370	3.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1030-BS	555218	6.56	705116	7.74	390526	11.08	407991	13.29	158740	3.51
MSV1030-MB	453280	6.56	614724	7.74	340168	11.07	326839	13.29	153988	3.51
ZZZZZZ	466893	6.56	619385	7.74	338116	11.07	315376	13.29	144783	3.51
ZZZZZZ	434286	6.56	578378	7.74	323632	11.07	324259	13.29	154495	3.52
MC27830-1	434510	6.56	574185	7.74	319907	11.07	303999	13.29	154716	3.51
ZZZZZZ	436297	6.56	563474	7.74	315824	11.07	299547	13.29	155507	3.51
ZZZZZZ	412096	6.56	548798	7.74	307524	11.07	290831	13.29	147600	3.51
MC27802-1	611119	6.55	734177	7.73	415365	11.07	434637	13.28	303795	3.52
MC27830-1MS	554748	6.55	700665	7.74	385176	11.07	408799	13.28	187631	3.51
MC27830-1MSD	558709	6.56	716488	7.74	391053	11.07	409245	13.28	188963	3.51
MC27802-1	537368	6.56	680291	7.74	374393	11.07	374605	13.28	180953	3.51
MC27802-2	521116	6.56	675921	7.74	370180	11.07	370673	13.28	188063	3.51
MC27802-3	517001	6.55	658473	7.73	358856	11.07	366090	13.28	188073	3.50
ZZZZZZ	473320	6.55	643479	7.74	348394	11.07	339009	13.28	175878	3.50
ZZZZZZ	452237	6.55	628015	7.73	342513	11.07	327174	13.28	175997	3.50
ZZZZZZ	448842	6.55	611624	7.74	334213	11.07	321873	13.28	172192	3.51
ZZZZZZ	419487	6.55	577125	7.73	323705	11.07	308993	13.28	149926	3.50
ZZZZZZ	410543	6.56	557565	7.74	313349	11.07	299503	13.28	145297	3.52
ZZZZZZ	408779	6.56	551284	7.74	315162	11.07	307384	13.28	142962	3.51

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

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

Volatile Surrogate Recovery Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27802-1	V27296.D	95.0	99.0	102.0
MC27802-1	V27293.D	86.0	103.0	103.0
MC27802-2	V27297.D	97.0	98.0	104.0
MC27802-2	V27264.D	87.0	93.0	106.0
MC27802-3	V27298.D	96.0	99.0	105.0
MC27802-3	V27265.D	85.0	93.0	106.0
MC27802-4	V27255.D	107.0	100.0	103.0
MC27745-1MS	V27271.D	92.0	98.0	101.0
MC27745-1MSD	V27272.D	93.0	98.0	100.0
MC27830-1MS	V27294.D	95.0	98.0	101.0
MC27830-1MSD	V27295.D	97.0	99.0	102.0
MSV1029-BS	V27247.D	96.0	99.0	99.0
MSV1029-MB	V27251.D	103.0	98.0	104.0
MSV1030-BS	V27284.D	97.0	99.0	102.0
MSV1030-MB	V27287.D	105.0	97.0	105.0

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

6.5.1

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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-MB	R36731.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Dipbenylhydraziue	ND	5.0	0.65	ug/l	
121-14-2	2,4-Diuitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-MB	R36731.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	28%	15-110%
118-79-6	2,4,6-Tribromophenol	72%	15-110%
4165-60-0	Nitrobenzene-d5	79%	30-130%
321-60-8	2-Fluorobiphenyl	63%	30-130%
1718-51-0	Terphenyl-d14	90%	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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36627-MB	R36719.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27802-1, MC27802-2, MC27802-3

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	0.034	0.10	0.027	ug/l	J
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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.025	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	82%	30-130%
321-60-8	2-Fluorobiphenyl	65%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-BS	R36732.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
OP36626-BSD	R36733.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	15.6	31	17.1	34	9	30-130/20
95-57-8	2-Chlorophenol	50	31.4	63	34.6	69	10	30-130/20
59-50-7	4-Chloro-3-methyl phenol	50	39.2	78	43.4	87	10	30-130/20
120-83-2	2,4-Dichlorophenol	50	35.9	72	39.3	79	9	30-130/20
105-67-9	2,4-Dimethylphenol	50	35.6	71	38.8	78	9	30-130/20
51-28-5	2,4-Dinitrophenol	50	31.9	64	32.8	66	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	50	40.1	80	41.9	84	4	30-130/20
95-48-7	2-Methylphenol	50	30.8	62	33.4	67	8	30-130/20
	3&4-Methylphenol	100	57.5	58	62.3	62	8	30-130/20
88-75-5	2-Nitrophenol	50	35.4	71	38.7	77	9	30-130/20
100-02-7	4-Nitrophenol	50	21.3	43	22.1	44	4	30-130/20
87-86-5	Pentachlorophenol	50	38.8	78	41.3	83	6	30-130/20
108-95-2	Phenol	50	15.7	31	16.8	34	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	50	36.5	73	39.4	79	8	30-130/20
88-06-2	2,4,6-Trichlorophenol	50	35.9	72	39.6	79	10	30-130/20
62-53-3	Aniline	50	24.4	49	26.7	53	9	40-140/20
101-55-3	4-Bromophenyl phenyl ether	50	45.5	91	48.5	97	6	40-140/20
85-68-7	Butyl benzyl phthalate	50	55.6	111	59.2	118	6	40-140/20
100-51-6	Benzyl Alcohol	50	28.3	57	30.5	61	7	40-140/20
91-58-7	2-Chloronaphthalene	50	41.2	82	44.4	89	7	40-140/20
106-47-8	4-Chloroaniline	50	36.1	72	38.8	78	7	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	50	40.9	82	44.5	89	8	40-140/20
111-44-4	bis(2-Chloroethyl)ether	50	40.6	81	43.9	88	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	50	40.3	81	43.3	87	7	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	50	46.2	92	49.0	98	6	40-140/20
122-66-7	1,2-Diphenylhydrazine	50	53.2	106	57.2	114	7	40-140/20
121-14-2	2,4-Dinitrotoluene	50	48.7	97	51.2	102	5	40-140/20
606-20-2	2,6-Dinitrotoluene	50	43.4	87	46.3	93	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	50	44.1	88	47.4	95	7	40-140/20
132-64-9	Dibenzofuran	50	43.0	86	46.1	92	7	40-140/20
84-74-2	Di-n-butyl phthalate	50	50.2	100	52.7	105	5	40-140/20
117-84-0	Di-n-octyl phthalate	50	58.7	117	62.5	125	6	40-140/20
84-66-2	Diethyl phthalate	50	47.2	94	48.3	97	2	40-140/20
131-11-3	Dimethyl phthalate	50	35.5	71	34.8	70	2	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	57.3	115	60.6	121	6	40-140/20
118-74-1	Hexachlorobenzene	50	47.7	95	50.7	101	6	40-140/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-BS	R36732.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
OP36626-BSD	R36733.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	50	15.0	30* a	17.1	34* a	13	40-140/20
67-72-1	Hexachloroethane	50	22.3	45	27.9	56	22* b	40-140/20
78-59-1	Isophorone	50	46.4	93	50.3	101	8	40-140/20
88-74-4	2-Nitroaniline	50	45.1	90	48.4	97	7	40-140/20
99-09-2	3-Nitroaniline	50	43.3	87	44.9	90	4	40-140/20
100-01-6	4-Nitroaniline	50	46.6	93	48.2	96	3	40-140/20
98-95-3	Nitrobenzene	50	44.9	90	49.0	98	9	40-140/20
62-75-9	n-Nitrosodimethylamine	50	23.3	47	26.8	54	14	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	50	49.5	99	52.9	106	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	50	45.0	90	48.3	97	7	40-140/20
110-86-1	Pyridine	50	19.4	39* a	22.0	44	13	40-140/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	40%	43%	15-110%
4165-62-2	Phenol-d5	30%	31%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	86%	15-110%
4165-60-0	Nitrobenzene-d5	84%	90%	30-130%
321-60-8	2-Fluorobiphenyl	69%	75%	30-130%
1718-51-0	Terphenyl-d14	89%	93%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Individual spike recoveries within acceptance limits.

* = Outside of Control Limits.

7.2.1

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Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36627-BS	R36720.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
OP36627-BSD	R36721.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	44.2	88	47.8	96	8	40-140/30
208-96-8	Acenaphthylene	50	35.0	70	37.8	76	8	40-140/30
120-12-7	Anthracene	50	49.6	99	51.8	104	4	40-140/30
56-55-3	Benzo(a)anthracene	50	63.9	128	66.8	134	4	40-140/30
50-32-8	Benzo(a)pyrene	50	47.7	95	49.9	100	5	40-140/30
205-99-2	Benzo(b)fluoranthene	50	54.8	110	57.3	115	4	40-140/30
191-24-2	Benzo(g,h,i)perylene	50	53.9	108	56.4	113	5	40-140/30
207-08-9	Benzo(k)fluoranthene	50	53.2	106	55.7	111	5	40-140/30
218-01-9	Chrysene	50	53.2	106	57.8	116	8	40-140/30
53-70-3	Dibenzo(a,h)anthracene	50	57.2	114	59.9	120	5	40-140/30
206-44-0	Fluoranthene	50	58.2	116	60.5	121	4	40-140/30
86-73-7	Fluorene	50	48.1	96	51.5	103	7	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	56.5	113	59.0	118	4	40-140/30
90-12-0	1-Methylnaphthalene	50	36.8	74	40.9	82	11	40-140/30
91-57-6	2-Methylnaphthalene	50	35.5	71	39.4	79	10	40-140/30
85-01-8	Phenanthrene	50	51.2	102	53.4	107	4	40-140/30
129-00-0	Pyrene	50	57.9	116	60.1	120	4	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	86%	91%	30-130%
321-60-8	2-Fluorobiphenyl	70%	76%	30-130%
1718-51-0	Terphenyl-d14	85%	88%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-MS	R36748.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
OP36626-MSD	R36749.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
MC27500-17	R36750.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	MC27500-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	16.9	34	15.9	32	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.3	73	33.7	67	7	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	43.3	87	41.2	82	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	40.5	81	36.6	73	10	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	34.5	69	30.5	61	12	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	7.8	16* [a]	9.7	19* [a]	22* [b]	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	12.9	26* [a]	15.6	31	19	30-130/20
95-48-7	2-Methylphenol	ND		50	33.9	68	30.6	61	10	30-130/20
	3&4-Methylphenol	ND		100	63.6	64	57.4	57	10	30-130/20
88-75-5	2-Nitrophenol	ND		50	36.9	74	34.4	69	7	30-130/20
100-02-7	4-Nitrophenol	ND		50	21.1	42	22.0	44	4	30-130/20
87-86-5	Pentachlorophenol	ND		50	39.4	79	40.8	82	3	30-130/20
108-95-2	Phenol	ND		50	17.1	34	16.0	32	7	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	40.9	82	39.7	79	3	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	39.8	80	37.9	76	5	30-130/20
62-53-3	Aniline	ND		50	27.4	55	24.8	50	10	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	50.9	102	50.9	102	0	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	60.8	122	60.4	121	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	29.5	59	24.7	49	18	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	46.2	92	42.9	86	7	40-140/20
106-47-8	4-Chloroaniline	ND		50	40.8	82	36.4	73	11	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	45.5	91	40.7	81	11	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	46.3	93	43.1	86	7	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	46.1	92	42.1	84	9	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	51.0	102	50.4	101	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	58.3	117	58.1	116	0	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	51.1	102	52.1	104	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	47.9	96	47.5	95	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	52.5	105	52.8	106	1	40-140/20
132-64-9	Dibenzofuran	ND		50	48.2	96	45.9	92	5	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	54.3	109	54.5	109	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	65.5	131	65.2	130	0	40-140/20
84-66-2	Diethyl phthalate	ND		50	50.8	102	52.5	105	3	40-140/20
131-11-3	Dimethyl phthalate	ND		50	38.2	76	41.6	83	9	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	63.5	127	62.6	125	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	51.3	103	52.6	105	3	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36626-MS	R36748.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
OP36626-MSD	R36749.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354
MC27500-17	R36750.D	1	01/27/14	KR	01/22/14	OP36626	MSR1354

The QC reported here applies to the following samples: Method: SW846 8270D

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	MC27500-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	9.5	19* [a]	9.2	18* [a]	3	40-140/20
67-72-1	Hexachloroethane	ND		50	27.6	55	27.7	55	0	40-140/20
78-59-1	Isophorone	ND		50	52.2	104	46.6	93	11	40-140/20
88-74-4	2-Nitroaniline	ND		50	50.3	101	49.0	98	3	40-140/20
99-09-2	3-Nitroaniline	ND		50	47.0	94	47.4	95	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	49.7	99	50.5	101	2	40-140/20
98-95-3	Nitrobenzene	ND		50	51.1	102	47.3	95	8	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	28.7	57	25.9	52	10	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	56.0	112	49.8	100	12	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	48.7	97	50.1	100	3	40-140/20
110-86-1	Pyridine	ND		50	23.0	46	20.7	41	11	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-17	Limits
367-12-4	2-Fluorophenol	46%	43%	44%	15-110%
4165-62-2	Phenol-d5	33%	30%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	90%	76%	15-110%
4165-60-0	Nitrobenzene-d5	95%	88%	94%	30-130%
321-60-8	2-Fluorobiphenyl	76%	72%	75%	30-130%
1718-51-0	Terphenyl-d14	94%	97%	96%	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 non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36627-MS	R36722.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
OP36627-MSD	R36723.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353
MC27500-18	R36724.D	1	01/27/14	KR	01/22/14	OP36627	MSR1353

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27802-1, MC27802-2, MC27802-3

CAS No.	Compound	MC27500-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	49.7	99	47.0	94	6	40-140/20
208-96-8	Acenaphthylene	ND		50	39.3	79	36.8	74	7	40-140/20
120-12-7	Anthracene	ND		50	53.5	107	54.2	108	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	68.8	138	68.4	137	1	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	51.1	102	51.2	102	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	58.0	116	59.8	120	3	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	58.0	116	57.9	116	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	52.8	106	55.8	112	6	40-140/20
218-01-9	Chrysene	ND		50	59.6	119	59.5	119	0	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	61.3	123	61.3	123	0	40-140/20
206-44-0	Fluoranthene	ND		50	62.4	125	62.2	124	0	40-140/20
86-73-7	Fluorene	ND		50	53.3	107	52.2	104	2	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	60.4	121	60.3	121	0	40-140/20
90-12-0	1-Methylnaphthalene	0.054	J	50	42.7	85	39.4	79	8	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	41.0	82	38.1	76	7	40-140/20
85-01-8	Phenanthrene	0.025	JB	50	55.1	110	55.6	111	1	40-140/20
129-00-0	Pyrene	ND		50	62.4	125	62.2	124	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-18	Limits
4165-60-0	Nitrobenzene-d5	95%	89%	97%	30-130%
321-60-8	2-Fluorobiphenyl	78%	73%	75%	30-130%
1718-51-0	Terphenyl-d14	89%	90%	89%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1353-CC1261	Injection Date:	01/27/14
Lab File ID:	R36718.D	Injection Time:	08:50
Instrument ID:	GCMSR	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	581026	4.32	1876859	5.38	1072053	6.92	1767446	8.34	1338687	11.11	2475860	12.61
Upper Limit [a]	1162052	4.82	3753718	5.88	2144106	7.42	3534892	8.84	2677374	11.61	4951720	13.11
Lower Limit [b]	290513	3.82	938430	4.88	536027	6.42	883723	7.84	669344	10.61	1237930	12.11
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
OP36627-MB	547766	4.32	1755233	5.38	1005400	6.92	1651699	8.33	1233044	11.11	2356644	12.61
OP36627-BS	492772	4.32	1578993	5.38	896427	6.92	1472763	8.34	1158858	11.11	2096961	12.61
OP36627-BSD	464036	4.32	1500845	5.38	860130	6.92	1413181	8.34	1117243	11.11	2007751	12.61
OP36627-MS	452125	4.32	1460250	5.38	838498	6.92	1367315	8.34	1067672	11.11	1926846	12.61
OP36627-MSD	462107	4.32	1489223	5.38	851026	6.92	1393239	8.34	1095775	11.11	1959252	12.61
MC27500-18	441749	4.32	1436246	5.38	832347	6.91	1361984	8.33	1040431	11.11	1909033	12.61
MC27802-1	464517	4.32	1501624	5.38	854565	6.91	1398480	8.33	1072421	11.11	1944744	12.61
MC27802-2	492505	4.32	1562156	5.38	896100	6.92	1466871	8.33	1112271	11.10	2032170	12.61
MC27802-3	497113	4.32	1575889	5.38	908721	6.91	1483644	8.33	1124704	11.11	2041246	12.61

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

(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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1354-CC1262	Injection Date:	01/27/14
Lab File ID:	R36730.D	Injection Time:	15:43
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	379567	4.29	1436214	5.35	882064	6.89	1552616	8.17	1674452	10.81	1514073	12.55
Upper Limit [a]	759134	4.79	2872428	5.85	1764128	7.39	3105232	8.67	3348904	11.31	3028146	13.05
Lower Limit [b]	189784	3.79	718107	4.85	441032	6.39	776308	7.67	837226	10.31	757037	12.05

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
OP36626-MB	282043	4.29	1042609	5.35	633693	6.88	1109034	8.17	1143534	10.80	1073210	12.54
OP36626-BS	277198	4.29	1024329	5.35	621740	6.88	1098386	8.17	1173970	10.81	1092881	12.54
OP36626-BSD	255134	4.29	933063	5.35	568754	6.88	985203	8.17	1048523	10.80	960993	12.54
OP36631-MB	513257	4.32	1611570	5.37	903441	6.92	1449274	8.33	1067274	11.10	1944820	12.61
OP36631-BS	556813	4.32	1749077	5.38	981041	6.92	1573588	8.34	1199646	11.11	2141176	12.61
OP36631-BSD	528120	4.32	1669357	5.38	938544	6.92	1514918	8.34	1161693	11.11	2063793	12.61
OP36631-MS	528144	4.32	1691846	5.38	972926	6.92	1599671	8.33	1243984	11.11	2349736	12.61
OP36631-MSD	499031	4.32	1611550	5.38	929272	6.91	1532018	8.34	1202895	11.11	2307960	12.61
MC27794-2	485357	4.32	1556988	5.38	893183	6.91	1474635	8.33	1163249	11.11	2233867	12.62
ZZZZZZ	458731	4.32	1441004	5.38	813422	6.91	1310415	8.33	1020229	11.11	1986107	12.62
ZZZZZZ	513802	4.32	1627978	5.38	929501	6.92	1522272	8.34	1183045	11.11	2280561	12.62
ZZZZZZ	490301	4.32	1567014	5.38	898743	6.92	1478278	8.34	1152419	11.11	2204806	12.61
ZZZZZZ	498558	4.32	1597362	5.38	923316	6.92	1543291	8.34	1265193	11.12	2365218	12.63
ZZZZZZ	451527	4.32	1426868	5.38	809035	6.92	1313922	8.34	1027885	11.11	1972329	12.61
ZZZZZZ	482465	4.32	1558872	5.38	904536	6.92	1504573	8.34	1207194	11.11	2274196	12.62
OP36626-MS	244434	4.29	909913	5.35	557537	6.89	971642	8.17	1037846	10.81	969958	12.55
OP36626-MSD	266913	4.29	995069	5.35	601353	6.89	1049285	8.17	1142033	10.81	1060384	12.55
MC27500-17	259235	4.29	967586	5.35	583767	6.88	1025364	8.17	1056133	10.80	1019456	12.55
ZZZZZZ	254117	4.29	949214	5.35	574382	6.88	1008122	8.17	1037573	10.80	984800	12.55
ZZZZZZ	304208	4.29	1132821	5.35	691739	6.88	1220572	8.17	1240298	10.80	1181751	12.54
ZZZZZZ	328646	4.29	1235048	5.35	757256	6.89	1320429	8.17	1378358	10.81	1298523	12.55
ZZZZZZ	294330	4.29	1089941	5.35	672603	6.89	1166912	8.17	1218449	10.80	1165096	12.54
ZZZZZZ	319337	4.29	1226857	5.35	729488	6.88	1263954	8.17	1280326	10.81	1224654	12.55
MC27802-1	303547	4.29	1136728	5.35	677301	6.89	1155693	8.17	1161775	10.80	1093906	12.54
MC27802-2	296710	4.29	1099632	5.35	667390	6.88	1129865	8.17	1159031	10.80	1100127	12.55
MC27802-3	317106	4.29	1182389	5.35	716371	6.89	1214476	8.17	1238663	10.80	1194343	12.54
ZZZZZZ	297049	4.29	1124810	5.35	667448	6.88	1152967	8.17	1174020	10.80	1111934	12.54
ZZZZZZ	276439	4.29	1069153	5.35	625434	6.88	1068623	8.17	1081438	10.80	1031012	12.54
ZZZZZZ	286445	4.29	1075140	5.35	649052	6.88	1107580	8.17	1115067	10.80	1064451	12.55
ZZZZZZ	317498	4.29	1183489	5.35	714847	6.88	1225444	8.17	1258136	10.80	1195491	12.55
ZZZZZZ	578981	4.32	1828186	5.38	1067241	6.92	1733555	8.34	1312938	11.11	2424927	12.62
ZZZZZZ	505007	4.32	1675705	5.38	947570	6.92	1529405	8.33	1129142	11.11	2088731	12.61
ZZZZZZ	524533	4.32	1716603	5.38	967757	6.92	1560635	8.34	1177251	11.11	2199124	12.61
ZZZZZZ	564023	4.32	1823310	5.38	1040234	6.91	1707677	8.34	1282483	11.11	2387177	12.61
ZZZZZZ	282807	4.29	1120498	5.35	619578	6.88	1174733	8.17	1209248	10.80	1169524	12.54

7.4.2

Semivolatile Internal Standard Area Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1354-CC1262	Injection Date:	01/27/14
Lab File ID:	R36730.D	Injection Time:	15:43
Instrument ID:	GCMSR	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
ZZZZZZ	283979	4.29	1102459	5.35	620195	6.88	1186438	8.17	1237090	10.80	1178609	12.54
ZZZZZZ	312950	4.29	1211816	5.35	678189	6.88	1278673	8.17	1337862	10.80	1259166	12.54
ZZZZZZ	298934	4.29	1164888	5.35	653293	6.88	1238974	8.17	1280479	10.80	1219695	12.54

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

Semivolatile Surrogate Recovery Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27802-1	R36756.D	44.0	33.0	80.0	81.0	65.0	95.0
MC27802-2	R36757.D	56.0	29.0	74.0	85.0	67.0	83.0
MC27802-3	R36758.D	51.0	27.0	71.0	80.0	61.0	80.0
OP36626-BS	R36732.D	40.0	30.0	82.0	84.0	69.0	89.0
OP36626-BSD	R36733.D	43.0	31.0	86.0	90.0	75.0	93.0
OP36626-MB	R36731.D	39.0	28.0	72.0	79.0	63.0	90.0
OP36626-MS	R36748.D	46.0	33.0	85.0	95.0	76.0	94.0
OP36626-MSD	R36749.D	43.0	30.0	90.0	88.0	72.0	97.0

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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27802-1	R36725.D	82.0	66.0	89.0
MC27802-2	R36726.D	91.0	74.0	89.0
MC27802-3	R36727.D	82.0	66.0	85.0
OP36627-BS	R36720.D	86.0	70.0	85.0
OP36627-BSD	R36721.D	91.0	76.0	88.0
OP36627-MB	R36719.D	82.0	65.0	86.0
OP36627-MS	R36722.D	95.0	78.0	89.0
OP36627-MSD	R36723.D	89.0	73.0	90.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36632-MB	YZ87719.D	1	01/23/14	CZ	01/22/14	OP36632	GYZ7477

The QC reported here applies to the following samples: Method: SW846 8011

MC27802-1, MC27802-2, MC27802-3, MC27802-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	118%	36-173%
460-00-4	Bromofluorobenzene (S)	114%	36-173%

Blank Spike Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36632-BS	YZ87720.D	1	01/23/14	CZ	01/22/14	OP36632	GYZ7477

The QC reported here applies to the following samples: Method: SW846 8011

MC27802-1, MC27802-2, MC27802-3, MC27802-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.099	139	60-140
106-93-4	1,2-Dibromoethane	0.071	0.081	114	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	148%	36-173%
460-00-4	Bromofluorobenzene (S)	140%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36632-MS	YZ87724.D	1	01/23/14	CZ	01/22/14	OP36632	GYZ7477
OP36632-MSD	YZ87725.D	1	01/23/14	CZ	01/22/14	OP36632	GYZ7477
MC27500-19	YZ87726.D	1	01/23/14	CZ	01/22/14	OP36632	GYZ7477

The QC reported here applies to the following samples: Method: SW846 8011

MC27802-1, MC27802-2, MC27802-3, MC27802-5

CAS No.	Compound	MC27500-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.099	139	0.10	141	1	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.073	103	0.084	118	14	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-19	Limits
460-00-4	Bromofluorobenzene (S)	145%	150%	154%	36-173%
460-00-4	Bromofluorobenzene (S)	156%	137%	158%	36-173%

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27802-1	YZ87727.D	146.0	153.0
MC27802-2	YZ87728.D	279.0* [c]	276.0* [c]
MC27802-3	YZ87729.D	137.0	161.0
MC27802-5	YZ87730.D	87.0	87.0
OP36632-BS	YZ87720.D	148.0	140.0
OP36632-MB	YZ87719.D	118.0	114.0
OP36632-MS	YZ87724.D	145.0	156.0
OP36632-MSD	YZ87725.D	150.0	137.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1
(c) Outside control limits due to possible matrix interference.

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7477-ICC7477	Injection Date:	01/23/14
Lab File ID:	YZ87714.D	Injection Time:	10:16
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.56	3.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	YZ87717A.D	01/23/14	11:31	3.57	3.47
OP36632-MB	YZ87719.D	01/23/14	12:21	3.56	3.42
OP36632-BS	YZ87720.D	01/23/14	12:47	3.56	3.43
ZZZZZZ	YZ87721.D	01/23/14	13:12	3.56	3.42
ZZZZZZ	YZ87722.D	01/23/14	13:36	3.56	3.44

Surrogate Compounds

S1 = Bromofluorohenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

8

GC Surrogate Retention Time Summary

Job Number: MC27802
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GYZ7477-CC7477	Injection Date:	01/23/14
Lab File ID:	YZ87723.D	Injection Time:	14:01
Instrument ID:	GCYZ	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	3.56	3.43

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP36632-MS	YZ87724.D	01/23/14	14:35	3.55	3.42
OP36632-MSD	YZ87725.D	01/23/14	14:59	3.56	3.43
MC27500-19	YZ87726.D	01/23/14	15:25	3.56	3.43
MC27802-1	YZ87727.D	01/23/14	15:50	3.55	3.39
MC27802-2	YZ87728.D	01/23/14	16:15	3.55	3.38
MC27802-3	YZ87729.D	01/23/14	16:40	3.55	3.38
MC27802-5	YZ87730.D	01/23/14	17:07	3.56	3.44

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC27828

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/26/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P56-ROX-012214	TB-ROX-012214-HCL
TB-ROX-012214-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

2.0 Laboratory Case Narrative \ Cooler Receipt Form

Were problems noted in the laboratory case narrative or cooler receipt form?

Although not indicated in the laboratory case narrative, the PAH compound benzo(g,h,i)perylene was detected in the method blank. VOC and SVOC LCS recoveries were outside evaluation criteria. SVOC surrogate 2,4,6-tribromophenol was outside evaluation criteria in sample P56-ROX-012214. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein, 2-chloroethyl vinyl ether, aniline, and bis(2-chloroisopopyl)ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 0.7ºC, 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?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP36653-MB	PAHs	Benzo(g,h,i)perylene	0.037 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times

(5X) the associated blank concentration did not required 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
MSV1031-BS/BSD	VOCs	Acrolein	**156/155**	1	70-130/25
MSV1031-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**330/272**	19	70-130/25
MSV1035-BS/BSD	VOCs	Acrolein	**159/175**	10	70-130/25
MSV1035-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**478/822**	**53**	70-130/25
OP36652-BS	SVOCs	bis(2-Chloroisopropyl)ether	**184**	NA	40-140

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?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P56-ROX-012214	SVOCs	2,4,6-Tribromophenol	**111**	15-110

Analytical data reported as non-detect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. No qualification of data was required.

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

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27828

Sampling Date: 01/22/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **66**

Reviewed on 2/26/2014

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 (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test resnlts relate only to samples analyzed.

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

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Sample Summary

Shell Oil

Job No: MC27828

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27828-1	01/22/14	15:25		01/23/14	AQ	Ground Water	P56-ROX-012214
MC27828-2	01/22/14	00:00		01/23/14	AQ	Ground Water	TB-ROX-012214-HCL
MC27828-3	01/22/14	00:00		01/23/14	AQ	Ground Water	TB-ROX-012214-ST

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27828
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/6/2014 2:33:28 PM

3 Sample(s) were collected on 01/22/2014 and were received at Accutest on 01/23/2014 properly preserved, at 0.7 Deg. C and intact. These Samples received an Accutest job number of MC27828. 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:** MSV1031

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27829-1MS, MC27829-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- MSV1031-BS/BSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein 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, 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 MC27829-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Continuing calibration standard MSV1031-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Matrix AQ **Batch ID:** MSV1035

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC27893-2MS, MC27893-2MSD were used as the QC samples indicated.
- Continuing calibration standard MSV1035-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds
- MSV1035-BS/BSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, Acetone, Acrolein 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 MC27893-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- RPD of MSV1035-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36652

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-23MS, MC27500-23MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- BS/MS/MSD Recovery(s) for bis(2-Chloroisopropyl)ether are outside control limits. Associated samples are non-detect for this compound.
- MC27828-1, OP36652-MS for 2,4,6-Tribromophenol: Outside control limits. Associated target analytes are non-detect.
- Initial calibration verification MSW729-ICV729 for Aniline, bis(2-chloroisopropyl)ether exceed 30% Difference. These compounds are within criteria in continuing calibration check standard MSW766-CC729.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36653

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27500-24MS, MC27500-24MSD 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: OP36674

- 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) MC27800-5MS, MC27800-5MSD 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(MC27828).

Summary of Hits

Job Number: MC27828
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/22/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27828-1	P56-ROX-012214					
Benzene		89.5	0.50	0.45	ug/l	SW846 8260C
n-Butylbenzene		3.3 J	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		2.3 J	5.0	0.58	ug/l	SW846 8260C
Ethylbenzene		305	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		39.9	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		1.8 J	5.0	0.55	ug/l	SW846 8260C
Naphthalene		56.6	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		42.6	5.0	0.59	ug/l	SW846 8260C
Toluene		26.3	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		74.0	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		17.2	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		224	1.0	0.70	ug/l	SW846 8260C
o-Xylene		9.3	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		233	1.0	0.41	ug/l	SW846 8260C
Dibenzofuran		0.47 J	2.1	0.16	ug/l	SW846 8270D
Acenaphthene		0.55	0.10	0.071	ug/l	SW846 8270D BY SIM
Anthracene		0.13	0.10	0.095	ug/l	SW846 8270D BY SIM
Fluorene		0.35	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		19.3	0.21	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		22.8	0.21	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		1.2	0.052	0.013	ug/l	SW846 8270D BY SIM

MC27828-2 TB-ROX-012214-HCL

No hits reported in this sample.

MC27828-3 TB-ROX-012214-ST

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P56-ROX-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27450.D	1	01/29/14	AMY	n/a	n/a	MSV1035
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	89.5	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	3.3	5.0	0.54	ug/l	J
135-98-8	sec-Butylbenzene	2.3	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethaue	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroetheue	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dicbloroethene	ND	1.0	0.54	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-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dicbloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	305	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	39.9	5.0	0.64	ug/l	
99-87-6	p-Isopropyltolueue	1.8	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methyleue chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	56.6	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	42.6	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	26.3	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroetbene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	74.0	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	17.2	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	224	1.0	0.70	ug/l	
95-47-6	o-Xylene	9.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	233	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration rauge
J = Indicates 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-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	99%		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	

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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-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17436.D	1	01/29/14	KR	01/28/14	OP36652	MSW766
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylpheuol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.2	0.53	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromopheuyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniliue	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	0.47	2.1	0.16	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-u-octyl phthalate	ND	5.2	0.45	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibratiou range
J = Indicates 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-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	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	42%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	111% [a]		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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	

(a) Outside control limits. Associated target analytes are non-detect.

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-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R36831.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.55	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	0.13	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	ng/l	
86-73-7	Fluorene	0.35	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	19.3	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	22.8	0.21	0.076	ug/l	
85-01-8	Phenanthrene	1.2	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	84%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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:	P56-ROX-012214		
Lab Sample ID:	MC27828-1	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54177.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	85%		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:	TB-ROX-012214-HCL		
Lab Sample ID:	MC27828-2	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27321.D	1	01/24/14	AMY	n/a	n/a	MSV1031
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012214-HCL		
Lab Sample ID:	MC27828-2	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ng/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ng/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
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E = Indicates valne exceeds calibration range
J = Indicates 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-012214-HCL		
Lab Sample ID:	MC27828-2	Date Sampled:	01/22/14
Matrix:	AQ - Gronnd Water	Date Received:	01/23/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		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	

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-012214-ST		
Lab Sample ID:	MC27828-3	Date Sampled:	01/22/14
Matrix:	AQ - Ground Water	Date Received:	01/23/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54179.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		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

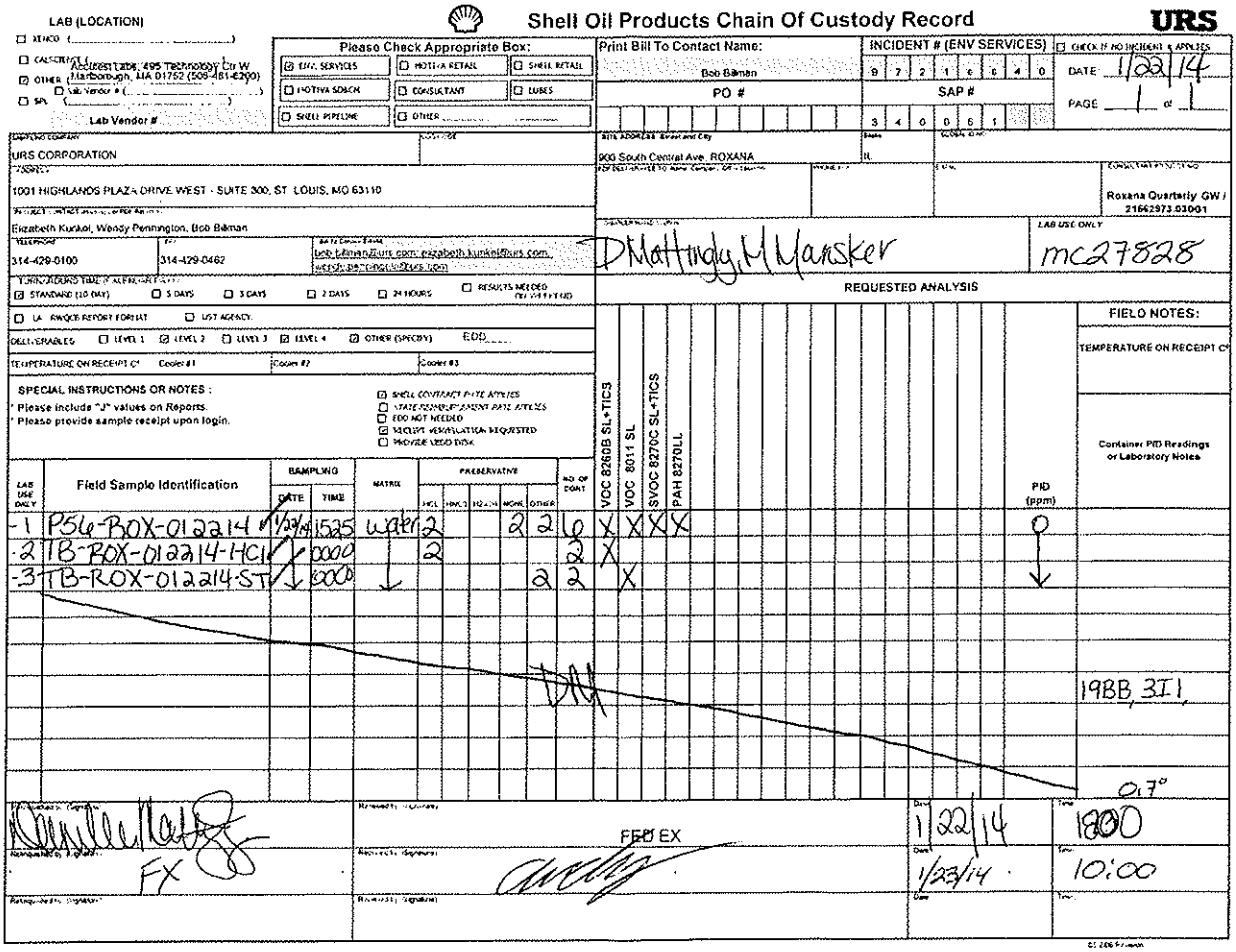
Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ XENCO (_____)
☐ CALSCIENCE
☑ OTHER Accutest Labs, 495 Technology Ctr 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 SOBCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE 1/22/14

PAGE 1 of 1

COMPANY	URS CORPORATION
ADDRESS	1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT	Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE	314-429-0100
FAX	314-429-0462
BATCH DELIVERY TIME	bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com
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

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA
State: IL
Global ID No.:
PO DELIVERABLE TO: Name, Company, Office Location
PHONE #
E-MAIL
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21662973.03001

SAMPLER NAME: D Mattingly, M Mansker

LAB USE ONLY: mc27828

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
☐ PROVIDE VEDD 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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P56-ROX-012214	1/22/14	1525	water	2			2	2	6	X	X	X	X	0	
-2	TB-ROX-012214-HCl		0000		2					2	X					
-3	TB-ROX-012214-ST		0000						2	2		X				
																19BB, 3I1,
																0.7°

DM

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/22/14	1800
FX	[signature]	1/23/14	10:00

MC27828: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27828 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/23/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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
5

MC27828: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27828

URSMOSTL:Roxana 1Q14 GW/ 21562973.0300I 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27828-1 Collected: 22-JAN-14 15:25 By: P56-ROX-012214			Received: 23-JAN-14 By:			
MC27828-1	SW846 8011	29-JAN-14 02:32	CZ	27-JAN-14	TA	V8011SL
MC27828-1	SW846 8270D	29-JAN-14 11:02	KR	28-JAN-14	MD	AB8270SL+
MC27828-1	SW846 8270D BY SIM	29-JAN-14 18:20	KR	28-JAN-14	MD	B8270SIMPAH
MC27828-1	SW846 8260C	29-JAN-14 22:31	AMY			V8260SL+
MC27828-2 Collected: 22-JAN-14 00:00 By: TB-ROX-012214-HCL			Received: 23-JAN-14 By:			
MC27828-2	SW846 8260C	24-JAN-14 13:00	AMY			V8260SL+
MC27828-3 Collected: 22-JAN-14 00:00 By: TB-ROX-012214-ST			Received: 23-JAN-14 By:			
MC27828-3	SW846 8011	29-JAN-14 03:20	CZ	27-JAN-14	TA	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/23/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27828-1.2	Walk In Ref #22	Michael DiBuono	01/24/14 08:24	Retrieve from Storage
MC27828-1.3	VOC Ref #3	Amy Min Yang	01/28/14 13:17	Retrieve from Storage
MC27828-1.3	Amy Min Yang	GCMSV	01/28/14 13:17	Load on Instrument
MC27828-1.3	GCMSV	Amy Min Yang	01/29/14 12:54	Unload from Instrument
MC27828-1.3	Amy Min Yang	VOC Ref #3	01/29/14 12:54	Return to Storage
MC27828-1.4	VOC Ref #3	Amy Min Yang	01/24/14 09:58	Retrieve from Storage
MC27828-1.4	Amy Min Yang	GCMSV	01/24/14 09:58	Load on Iustrument
MC27828-1.4	GCMSV	Amy Min Yang	01/28/14 12:25	Unload from Instrument
MC27828-1.4	Amy Min Yang	VOC Ref #3	01/28/14 12:25	Return to Storage
MC27828-1.4	VOC Ref #3	Amy Min Yang	01/29/14 12:56	Retrieve from Storage
MC27828-1.4	Amy Min Yang	GCMSV	01/29/14 12:56	Load on Instrument
MC27828-1.4	GCMSV	Amy Min Yang	01/30/14 10:05	Unload from Instrument
MC27828-1.4	Amy Min Yang	VOC Ref #3	01/30/14 10:05	Return to Storage
MC27828-1.6	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage
MC27828-2.1	VOC Ref #3	Amy Min Yang	01/27/14 14:48	Retrieve from Storage
MC27828-2.1	Amy Min Yang	GCMSV	01/27/14 14:48	Load on Instrument
MC27828-2.1	GCMSV	Amy Min Yang	01/28/14 12:25	Unload from Instrument
MC27828-2.1	Amy Min Yang	VOC Ref #3	01/28/14 12:25	Return to Storage
MC27828-2.2	VOC Ref #3	Amy Min Yang	01/24/14 09:58	Retrieve from Storage
MC27828-2.2	Amy Min Yang	GCMSV	01/24/14 09:58	Load on Instrument
MC27828-2.2	GCMSV	Amy Min Yang	01/28/14 12:25	Unload from Instrument
MC27828-2.2	Amy Min Yang	VOC Ref #3	01/28/14 12:25	Return to Storage
MC27828-3.2	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage

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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-MB	V27318.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-MB	V27318.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-MB	V27318.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	70-130%
2037-26-5	Toluene-D8	98%	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	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxaua 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroetbane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-BS	V27314.D	1	01/24/14	AMY	n/a	n/a	MSV1031
MSV1031-BSD	V27315.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	53.2	106	52.0	104	2	70-130/25
107-02-8	Acrolein	50	78.0	156* a	77.6	155* a	1	70-130/25
107-13-1	Acrylonitrile	100	99.6	100	101	101	1	70-130/25
71-43-2	Benzene	50	53.8	108	51.6	103	4	70-130/25
108-86-1	Bromobenzene	50	54.1	108	52.6	105	3	70-130/25
74-97-5	Bromochloromethane	50	52.8	106	51.1	102	3	70-130/25
75-27-4	Bromodichloromethane	50	59.6	119	56.4	113	6	70-130/25
75-25-2	Bromoform	50	44.4	89	43.3	87	3	70-130/25
74-83-9	Bromomethane	50	50.3	101	48.5	97	4	70-130/25
78-93-3	2-Butanone (MEK)	50	49.8	100	47.7	95	4	70-130/25
104-51-8	n-Butylbenzene	50	58.4	117	56.1	112	4	70-130/25
135-98-8	sec-Butylbenzene	50	58.6	117	56.7	113	3	70-130/25
98-06-6	tert-Butylbenzene	50	59.6	119	57.1	114	4	70-130/25
75-15-0	Carbon disulfide	50	46.5	93	43.9	88	6	70-130/25
56-23-5	Carbon tetrachloride	50	62.3	125	57.8	116	7	70-130/25
108-90-7	Chlorobenzene	50	46.8	94	45.1	90	4	70-130/25
75-00-3	Chloroethane	50	60.3	121	57.6	115	5	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	165	330* a	136	272* a	19	70-130/25
67-66-3	Chloroform	50	53.5	107	50.7	101	5	70-130/25
74-87-3	Chloromethane	50	46.8	94	50.0	100	7	70-130/25
95-49-8	o-Chlorotoluene	50	53.7	107	52.0	104	3	70-130/25
106-43-4	p-Chlorotoluene	50	55.3	111	53.4	107	3	70-130/25
124-48-1	Dibromochloromethane	50	58.3	117	55.8	112	4	70-130/25
95-50-1	1,2-Dichlorobenzene	50	49.8	100	48.5	97	3	70-130/25
541-73-1	1,3-Dichlorobenzene	50	50.5	101	48.8	98	3	70-130/25
106-46-7	1,4-Dichlorobenzene	50	49.9	100	48.9	98	2	70-130/25
75-71-8	Dichlorodifluoromethane	50	46.8	94	45.5	91	3	70-130/25
75-34-3	1,1-Dichloroethane	50	54.7	109	52.4	105	4	70-130/25
107-06-2	1,2-Dichloroethane	50	57.0	114	53.9	108	6	70-130/25
75-35-4	1,1-Dichloroethene	50	52.9	106	50.4	101	5	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	53.4	107	51.3	103	4	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	52.6	105	50.7	101	4	70-130/25
78-87-5	1,2-Dichloropropane	50	52.2	104	50.0	100	4	70-130/25
142-28-9	1,3-Dichloropropane	50	50.3	101	49.6	99	1	70-130/25
594-20-7	2,2-Dichloropropane	50	65.2	130	61.6	123	6	70-130/25
563-58-6	1,1-Dichloropropene	50	55.2	110	52.9	106	4	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-BS	V27314.D	1	01/24/14	AMY	n/a	n/a	MSV1031
MSV1031-BSD	V27315.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

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	50.9	102	48.8	98	4	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	52.8	106	50.8	102	4	70-130/25
123-91-1	1,4-Dioxane	250	225	90	223	89	1	70-130/25
97-63-2	Ethyl methacrylate	50	47.4	95	47.1	94	1	77-137/25
100-41-4	Ethylbenzene	50	54.7	109	51.7	103	6	70-130/25
87-68-3	Hexachlorobutadiene	50	60.1	120	58.5	117	3	70-130/25
591-78-6	2-Hexanone	50	49.8	100	45.4	91	9	70-130/25
98-82-8	Isopropylbenzene	50	60.2	120	57.9	116	4	70-130/25
99-87-6	p-Isopropyltoluene	50	57.4	115	55.5	111	3	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	57.4	115	56.8	114	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.6	107	54.1	108	1	70-130/25
74-95-3	Methylene bromide	50	53.5	107	51.6	103	4	70-130/25
75-09-2	Methylene chloride	50	48.5	97	47.0	94	3	70-130/25
91-20-3	Naphthalene	50	51.9	104	54.3	109	5	70-130/25
103-65-1	n-Propylbenzene	50	58.1	116	56.0	112	4	70-130/25
100-42-5	Styrene	50	49.4	99	47.2	94	5	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	54.7	109	52.0	104	5	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	50.9	102	50.9	102	0	70-130/25
127-18-4	Tetrachloroethene	50	54.4	109	51.7	103	5	70-130/25
108-88-3	Toluene	50	57.0	114	53.9	108	6	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	59.8	120	61.6	123	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	60.9	122	60.9	122	0	70-130/25
71-55-6	1,1,1-Trichloroethane	50	60.0	120	57.1	114	5	70-130/25
79-00-5	1,1,2-Trichloroethane	50	52.3	105	50.6	101	3	70-130/25
79-01-6	Trichloroethene	50	55.9	112	53.3	107	5	70-130/25
75-69-4	Trichlorofluoromethane	50	60.9	122	57.0	114	7	70-130/25
96-18-4	1,2,3-Trichloropropane	50	55.0	110	54.8	110	0	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	58.7	117	56.5	113	4	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	60.1	120	57.6	115	4	70-130/25
108-05-4	Vinyl Acetate	50	54.2	108	53.6	107	1	70-130/25
75-01-4	Vinyl chloride	50	45.8	92	44.7	89	2	70-130/25
	m,p-Xylene	100	90.6	91	85.6	86	6	70-130/25
95-47-6	o-Xylene	50	45.8	92	43.4	87	5	70-130/25
1330-20-7	Xylene (total)	150	136	91	129	86	5	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1031-BS	V27314.D	1	01/24/14	AMY	n/a	n/a	MSV1031
MSV1031-BSD	V27315.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	97%	70-130%
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	101%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	38.8	78	43.1	86	11	70-130/25
107-02-8	Acrolein	50	79.3	159* a	87.7	175* a	10	70-130/25
107-13-1	Acrylonitrile	100	98.8	99	109	109	10	70-130/25
71-43-2	Benzene	50	53.0	106	53.2	106	0	70-130/25
108-86-1	Bromobenzene	50	52.9	106	53.1	106	0	70-130/25
74-97-5	Bromochloromethane	50	52.7	105	54.1	108	3	70-130/25
75-27-4	Bromodichloromethane	50	56.5	113	56.5	113	0	70-130/25
75-25-2	Bromoform	50	42.0	84	43.9	88	4	70-130/25
74-83-9	Bromomethane	50	49.2	98	49.4	99	0	70-130/25
78-93-3	2-Butanone (MEK)	50	40.4	81	42.1	84	4	70-130/25
104-51-8	n-Butylbenzene	50	56.8	114	56.8	114	0	70-130/25
135-98-8	sec-Butylbenzene	50	57.7	115	57.4	115	1	70-130/25
98-06-6	tert-Butylbenzene	50	58.1	116	56.9	114	2	70-130/25
75-15-0	Carbon disulfide	50	44.9	90	46.2	92	3	70-130/25
56-23-5	Carbon tetrachloride	50	56.8	114	56.9	114	0	70-130/25
108-90-7	Chlorobenzene	50	45.9	92	46.4	93	1	70-130/25
75-00-3	Chloroethane	50	59.0	118	59.5	119	1	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	239	478* a	411	822* a	53* a	70-130/25
67-66-3	Chloroform	50	51.9	104	52.3	105	1	70-130/25
74-87-3	Chloromethane	50	46.8	94	47.9	96	2	70-130/25
95-49-8	o-Chlorotoluene	50	52.7	105	52.6	105	0	70-130/25
106-43-4	p-Chlorotoluene	50	53.3	107	53.4	107	0	70-130/25
124-48-1	Dibromochloromethane	50	54.8	110	56.3	113	3	70-130/25
95-50-1	1,2-Dichlorobenzene	50	48.2	96	49.2	98	2	70-130/25
541-73-1	1,3-Dichlorobenzene	50	49.4	99	49.8	100	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	48.6	97	49.1	98	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.8	80	41.2	82	3	70-130/25
75-34-3	1,1-Dichloroethane	50	53.5	107	54.8	110	2	70-130/25
107-06-2	1,2-Dichloroethane	50	51.9	104	52.7	105	2	70-130/25
75-35-4	1,1-Dichloroethene	50	51.9	104	53.9	108	4	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	53.6	107	54.9	110	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	52.4	105	53.5	107	2	70-130/25
78-87-5	1,2-Dichloropropane	50	51.6	103	51.8	104	0	70-130/25
142-28-9	1,3-Dichloropropane	50	48.9	98	50.3	101	3	70-130/25
594-20-7	2,2-Dichloropropane	50	63.7	127	64.7	129	2	70-130/25
563-58-6	1,1-Dichloropropene	50	53.0	106	53.1	106	0	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

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	49.0	98	49.8	100	2	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	50.2	100	51.2	102	2	70-130/25
123-91-1	1,4-Dioxane	250	214	86	246	98	14	70-130/25
97-63-2	Ethyl methacrylate	50	46.0	92	49.4	99	7	77-137/25
100-41-4	Ethylbenzene	50	53.4	107	53.1	106	1	70-130/25
87-68-3	Hexachlorobutadiene	50	56.5	113	57.2	114	1	70-130/25
591-78-6	2-Hexanone	50	38.0	76	41.7	83	9	70-130/25
98-82-8	Isopropylbenzene	50	59.3	119	58.6	117	1	70-130/25
99-87-6	p-Isopropyltoluene	50	55.7	111	55.8	112	0	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	56.6	113	61.5	123	8	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.7	101	57.0	114	12	70-130/25
74-95-3	Methylene bromide	50	50.8	102	52.4	105	3	70-130/25
75-09-2	Methylene chloride	50	49.5	99	50.5	101	2	70-130/25
91-20-3	Naphthalene	50	50.5	101	59.7	119	17	70-130/25
103-65-1	n-Propylbenzene	50	56.2	112	56.3	113	0	70-130/25
100-42-5	Styrene	50	48.7	97	49.1	98	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	53.0	106	52.9	106	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.9	98	52.8	106	8	70-130/25
127-18-4	Tetrachloroethene	50	52.7	105	52.5	105	0	70-130/25
108-88-3	Toluene	50	55.8	112	55.8	112	0	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	56.8	114	64.2	128	12	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	58.7	117	63.8	128	8	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.2	116	58.6	117	1	70-130/25
79-00-5	1,1,2-Trichloroethane	50	50.4	101	52.6	105	4	70-130/25
79-01-6	Trichloroethene	50	54.5	109	54.0	108	1	70-130/25
75-69-4	Trichlorofluoromethane	50	55.9	112	57.2	114	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	52.0	104	56.1	112	8	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	57.3	115	57.1	114	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	58.5	117	58.1	116	1	70-130/25
108-05-4	Vinyl Acetate	50	53.3	107	55.6	111	4	70-130/25
75-01-4	Vinyl chloride	50	45.2	90	46.2	92	2	70-130/25
	m,p-Xylene	100	89.4	89	89.0	89	0	70-130/25
95-47-6	o-Xylene	50	45.0	90	44.8	90	0	70-130/25
1330-20-7	Xylene (total)	150	134	89	134	89	0	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	98%	70-130%
2037-26-5	Toluene-D8	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27829-1MS	V27325.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1MSD	V27326.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1	V27322.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Compound	MC27829-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	157	63* [a]	151	60* [a]	4	70-130/30
107-02-8	Acrolein	ND		250	359	144* [a]	352	141* [a]	2	70-130/30
107-13-1	Acrylonitrile	ND		500	530	106	522	104	2	70-130/30
71-43-2	Benzene	ND		250	281	112	270	108	4	70-130/30
108-86-1	Bromobenzene	ND		250	275	110	277	111	1	70-130/30
74-97-5	Bromochloromethane	ND		250	270	108	268	107	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	293	117	285	114	3	70-130/30
75-25-2	Bromoform	ND		250	225	90	225	90	0	70-130/30
74-83-9	Bromomethane	ND		250	249	100	234	94	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	188	75	194	78	3	70-130/30
104-51-8	n-Butylbenzene	ND		250	298	119	298	119	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	303	121	301	120	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	302	121	298	119	1	70-130/30
75-15-0	Carbon disulfide	ND		250	247	99	235	94	5	70-130/30
56-23-5	Carbon tetrachloride	ND		250	309	124	296	118	4	70-130/30
108-90-7	Chlorobenzene	ND		250	240	96	233	93	3	70-130/30
75-00-3	Chloroethane	ND		250	300	120	281	112	7	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	13.2	5* [a]	ND	0* [a]	200* [b]	70-130/30
67-66-3	Chloroform	ND		250	269	108	261	104	3	70-130/30
74-87-3	Chloromethane	ND		250	268	107	252	101	6	70-130/30
95-49-8	o-Chlorotoluene	ND		250	274	110	273	109	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	283	113	278	111	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	296	118	289	116	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	251	100	254	102	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	260	104	259	104	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	256	102	256	102	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	271	108	252	101	7	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	284	114	272	109	4	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	278	111	270	108	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	289	116	275	110	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	277	111	269	108	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	282	113	267	107	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	269	108	259	104	4	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	264	106	259	104	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	320	128	327	131* [a]	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	289	116	277	111	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27829-1MS	V27325.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1MSD	V27326.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1	V27322.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Compound	MC27829-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	246	98	247	99	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	265	106	262	105	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1240	99	1370	110	10	70-130/30
97-63-2	Ethyl methacrylate	ND		250	244	98	249	100	2	72-139/30
100-41-4	Ethylbenzene	ND		250	280	112	270	108	4	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	290	116	309	124	6	70-130/30
591-78-6	2-Hexanone	ND		250	194	78	200	80	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	310	124	307	123	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	294	118	293	117	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	3.4		250	297	117	303	120	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	276	110	285	114	3	70-130/30
74-95-3	Methylene bromide	ND		250	269	108	266	106	1	70-130/30
75-09-2	Methylene chloride	ND		250	261	104	251	100	4	70-130/30
91-20-3	Naphthalene	ND		250	243	97	288	115	17	70-130/30
103-65-1	n-Propylbenzene	ND		250	294	118	293	117	0	70-130/30
100-42-5	Styrene	ND		250	255	102	246	98	4	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	275	110	271	108	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	260	104	271	108	4	70-130/30
127-18-4	Tetrachloroethene	ND		250	280	112	271	108	3	70-130/30
108-88-3	Toluene	ND		250	287	115	283	113	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	271	108	314	126	15	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	297	119	321	128	8	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	300	120	297	119	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	263	105	263	105	0	70-130/30
79-01-6	Trichloroethene	ND		250	284	114	275	110	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	297	119	276	110	7	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	283	113	290	116	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	297	119	296	118	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	306	122	303	121	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	283	113	278	111	2	70-130/30
75-01-4	Vinyl chloride	ND		250	237	95	222	89	7	70-130/30
	m,p-Xylene	ND		500	464	93	446	89	4	70-130/30
95-47-6	o-Xylene	ND		250	232	93	225	90	3	70-130/30
1330-20-7	Xylene (total)	ND		750	696	93	671	89	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27829-1MS	V27325.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1MSD	V27326.D	5	01/24/14	AMY	n/a	n/a	MSV1031
MC27829-1	V27322.D	1	01/24/14	AMY	n/a	n/a	MSV1031

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

MC27828-2

CAS No.	Surrogate Recoveries	MS	MSD	MC27829-1	Limits
1868-53-7	Dibromofluoromethane	98%	97%	113%	70-130%
2037-26-5	Toluene-D8	98%	98%	98%	70-130%
460-00-4	4-Bromofluorobenzene	100%	102%	105%	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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Compound	MC27893-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	143	57* [a]	151	60* [a]	5	70-130/30
107-02-8	Acrolein	ND		250	339	136* [a]	339	136* [a]	0	70-130/30
107-13-1	Acrylonitrile	ND		500	515	103	503	101	2	70-130/30
71-43-2	Benzene	ND		250	280	112	277	111	1	70-130/30
108-86-1	Bromobenzene	ND		250	278	111	277	111	0	70-130/30
74-97-5	Bromochloromethane	ND		250	275	110	276	110	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	292	117	289	116	1	70-130/30
75-25-2	Bromoform	ND		250	222	89	215	86	3	70-130/30
74-83-9	Bromomethane	ND		250	239	96	234	94	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	189	76	189	76	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	297	119	296	118	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	305	122	305	122	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	300	120	300	120	0	70-130/30
75-15-0	Carbon disulfide	ND		250	223	89	227	91	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	300	120	290	116	3	70-130/30
108-90-7	Chlorobenzene	ND		250	242	97	239	96	1	70-130/30
75-00-3	Chloroethane	ND		250	289	116	278	111	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	202	81	13.9	6* [a]	174* [b]	70-130/30
67-66-3	Chloroform	ND		250	272	109	265	106	3	70-130/30
74-87-3	Chloromethane	ND		250	239	96	240	96	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	275	110	274	110	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	281	112	279	112	1	70-130/30
124-48-1	Dihromochloromethane	ND		250	290	116	285	114	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	254	102	253	101	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	259	104	258	103	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	256	102	255	102	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	225	90	216	86	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	282	113	276	110	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	272	109	263	105	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	277	111	274	110	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	284	114	283	113	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	278	111	275	110	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	272	109	272	109	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	261	104	257	103	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	339	136* [a]	321	128	5	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	284	114	276	110	3	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Compound	MC27893-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	254	102	253	101	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	265	106	263	105	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	945	76	1090	87	14	70-130/30
97-63-2	Ethyl methacrylate	ND		250	254	102	246	98	3	72-139/30
100-41-4	Ethylbenzene	ND		250	281	112	275	110	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	287	115	295	118	3	70-130/30
591-78-6	2-Hexanone	ND		250	201	80	189	76	6	70-130/30
98-82-8	Isopropylbenzene	ND		250	309	124	309	124	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	295	118	293	117	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	4.7		250	297	117	286	113	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	286	114	270	108	6	70-130/30
74-95-3	Methylene bromide	ND		250	270	108	262	105	3	70-130/30
75-09-2	Methylene chloride	ND		250	259	104	254	102	2	70-130/30
91-20-3	Naphthalene	ND		250	262	105	261	104	0	70-130/30
103-65-1	n-Propylbenzene	ND		250	295	118	295	118	0	70-130/30
100-42-5	Styrene	ND		250	258	103	253	101	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	277	111	269	108	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	268	107	259	104	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	277	111	275	110	1	70-130/30
108-88-3	Toluene	ND		250	292	117	292	117	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	285	114	292	117	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	312	125	312	125	0	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	301	120	294	118	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	268	107	266	106	1	70-130/30
79-01-6	Trichloroethene	ND		250	285	114	281	112	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	283	113	267	107	6	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	273	109	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	296	118	297	119	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	303	121	300	120	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	285	114	275	110	4	70-130/30
75-01-4	Vinyl chloride	ND		250	223	89	219	88	2	70-130/30
	m,p-Xylene	ND		500	465	93	463	93	0	70-130/30
95-47-6	o-Xylene	ND		250	234	94	232	93	1	70-130/30
1330-20-7	Xylene (total)	ND		750	699	93	695	93	1	70-130/30

* = Ontside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27828-1

CAS No.	Surrogate Recoveries	MS	MSD	MC27893-2	Limits
1868-53-7	Dihromofluoromethane	97%	95%	107%	70-130%
2037-26-5	Toluene-D8	99%	98%	98%	70-130%
460-00-4	4-Bromofluorobenzene	100%	100%	106%	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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1031-CC1019	Injection Date:	01/24/14
Lab File ID:	V27313.D	Injection Time:	08:49
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	514592	6.54	649008	7.73	368930	11.07	399338	13.28	144720	3.50
Upper Limit [a]	1029184	7.04	1298016	8.23	737860	11.57	798676	13.78	289440	4.00
Lower Limit [b]	257296	6.04	324504	7.23	184465	10.57	199669	12.78	72360	3.00
Lab Sample ID	1S 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1031-BS	493647	6.55	615759	7.73	344000	11.07	372785	13.28	150270	3.50
MSV1031-BSD	515674	6.55	645718	7.73	360171	11.07	382453	13.28	169311	3.51
MSV1031-MB	409590	6.55	549727	7.73	310692	11.07	296536	13.28	146752	3.51
ZZZZZZ	465172	6.55	615292	7.73	328422	11.07	305105	13.28	165947	3.51
ZZZZZZ	382310	6.55	516464	7.73	296517	11.07	278875	13.28	147902	3.51
MC27828-2	358617	6.55	488426	7.73	282817	11.07	267668	13.28	139379	3.51
MC27829-1	358718	6.55	493803	7.73	280267	11.07	267145	13.28	140826	3.50
ZZZZZZ	538116	6.55	665906	7.73	358815	11.07	354233	13.28	369025[c]	3.52
ZZZZZZ	462042	6.56	612436	7.74	331313	11.07	321319	13.28	187463	3.51
MC27829-1MS	586652	6.55	731898	7.73	398647	11.07	428955	13.28	199654	3.51
MC27829-1MSD	571226	6.55	724852	7.73	400395	11.07	419874	13.28	200678	3.50
ZZZZZZ	468218	6.56	625109	7.74	344807	11.07	338585	13.28	173327	3.51

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
1S 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.

Volatile Internal Standard Area Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1035-CC1019	Injection Date:	01/29/14
Lab File ID:	V27424.D	Injection Time:	11:03
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	530361	6.56	676996	7.74	381897	11.08	412049	13.29	173284	3.52
Upper Limit [a]	1060722	7.06	1353992	8.24	763794	11.58	824098	13.79	346568	4.02
Lower Limit [b]	265181	6.06	338498	7.24	190949	10.58	206025	12.79	86642	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
MSV1035-BS	543620	6.56	698899	7.74	385229	11.08	415808	13.29	165753	3.52
MSV1035-BSD	544877	6.56	697958	7.74	387523	11.08	419770	13.29	199457	3.53
MSV1035-MB	439388	6.56	600006	7.74	340247	11.08	328346	13.29	137712	3.52
ZZZZZZ	435813	6.56	595677	7.74	339748	11.08	336170	13.29	155436	3.52
ZZZZZZ	447783	6.57	615156	7.75	352447	11.08	339571	13.29	166997	3.52
MC27893-2	416411	6.56	567728	7.74	323053	11.08	309090	13.29	143137	3.52
ZZZZZZ	450714	6.56	575104	7.74	328234	11.08	306607	13.29	125183	3.52
ZZZZZZ	387502	6.57	531510	7.74	327736	11.08	340545	13.29	115072	3.62
MC27893-2MS	553229	6.57	706986	7.75	390728	11.08	422135	13.29	166769	3.54
MC27893-2MSD	561679	6.56	714234	7.74	397041	11.08	423876	13.29	165213	3.52
ZZZZZZ	512071	6.56	678048	7.74	374522	11.08	373728	13.29	180425	3.52
ZZZZZZ	541592	6.56	700736	7.74	388660	11.08	394843	13.29	212228	3.51
ZZZZZZ	521235	6.56	709489	7.74	393174	11.07	394263	13.29	191620	3.52
ZZZZZZ	480517	6.56	650363	7.74	362801	11.07	360914	13.29	161482	3.51
ZZZZZZ	470840	6.56	634308	7.74	356556	11.07	357392	13.29	148282	3.51
ZZZZZZ	462841	6.56	622948	7.73	369659	11.07	364360	13.29	167695	3.52
ZZZZZZ	469582	6.56	638033	7.74	359318	11.07	352593	13.29	172235	3.52
ZZZZZZ	457675	6.56	621354	7.74	349693	11.07	339227	13.28	162192	3.52
ZZZZZZ	458341	6.56	629981	7.74	353869	11.07	342808	13.28	147617	3.52
ZZZZZZ	462135	6.56	593543	7.73	330879	11.07	319685	13.28	141918	3.52
ZZZZZZ	429912	6.55	572799	7.73	331465	11.07	330214	13.28	145970	3.51
ZZZZZZ	418182	6.56	564553	7.73	320747	11.07	313699	13.28	156276	3.52
MC27828-1	515980	6.55	647579	7.73	368659	11.07	371185	13.28	224455	3.51
ZZZZZZ	487681	6.55	641392	7.74	360941	11.07	365688	13.28	143154	3.51

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

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

Volatile Surrogate Recovery Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27828-1	V27450.D	92.0	99.0	107.0
MC27828-2	V27321.D	113.0	99.0	105.0
MC27829-1MS	V27325.D	98.0	98.0	100.0
MC27829-1MSD	V27326.D	97.0	98.0	102.0
MC27893-2MS	V27436.D	97.0	99.0	100.0
MC27893-2MSD	V27437.D	95.0	98.0	100.0
MSV1031-BS	V27314.D	98.0	100.0	100.0
MSV1031-BSD	V27315.D	97.0	99.0	101.0
MSV1031-MB	V27318.D	108.0	98.0	107.0
MSV1035-BS	V27425.D	98.0	99.0	101.0
MSV1035-BSD	V27426.D	98.0	99.0	100.0
MSV1035-MB	V27429.D	105.0	98.0	103.0

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

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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-MB	W17428.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-MB	W17428.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	35%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	77%	15-110%
4165-60-0	Nitrobenzene-d5	49%	30-130%
321-60-8	2-Fluorobiphenyl	50%	30-130%
1718-51-0	Terphenyl-d14	98%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Cone.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36653-MB	R36826.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27828-1

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	0.037	0.10	0.027	ug/l	J
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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	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	61%	30-130%
321-60-8	2-Fluorobiphenyl	49%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

Blank Spike Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-BS	W17429.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	21.1	42	30-130
95-57-8	2-Chlorophenol	50	39.5	79	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.1	78	30-130
120-83-2	2,4-Dichlorophenol	50	40.6	81	30-130
105-67-9	2,4-Dimethylphenol	50	35.8	72	30-130
51-28-5	2,4-Dinitrophenol	50	35.1	70	30-130
534-52-1	4,6-Dinitro-o-cresol	50	47.5	95	30-130
95-48-7	2-Methylphenol	50	34.5	69	30-130
	3&4-Methylphenol	100	62.0	62	30-130
88-75-5	2-Nitrophenol	50	42.5	85	30-130
100-02-7	4-Nitrophenol	50	15.7	31	30-130
87-86-5	Pentachlorophenol	50	41.6	83	30-130
108-95-2	Phenol	50	17.8	36	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.2	80	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.9	82	30-130
62-53-3	Aniline	50	25.7	51	40-140
101-55-3	4-Bromophenyl phenyl ether	50	54.9	110	40-140
85-68-7	Butyl benzyl phthalate	50	46.4	93	40-140
100-51-6	Benzyl Alcohol	50	37.4	75	40-140
91-58-7	2-Chloronaphthalene	50	39.8	80	40-140
106-47-8	4-Chloroaniline	50	38.0	76	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	34.1	68	40-140
111-44-4	bis(2-Chloroethyl)ether	50	45.5	91	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	92.2	184* [a]	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	46.6	93	40-140
122-66-7	1,2-Diphenylhydrazine	50	44.1	88	40-140
121-14-2	2,4-Dinitrotoluene	50	45.3	91	40-140
606-20-2	2,6-Dinitrotoluene	50	43.3	87	40-140
91-94-1	3,3'-Dichlorobenzidine	50	40.8	82	40-140
132-64-9	Dibenzofuran	50	42.7	85	40-140
84-74-2	Di-n-butyl phthalate	50	42.0	84	40-140
117-84-0	Di-n-octyl phthalate	50	45.5	91	40-140
84-66-2	Diethyl phthalate	50	42.0	84	40-140
131-11-3	Dimethyl phthalate	50	39.2	78	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.7	97	40-140
118-74-1	Hexachlorobenzene	50	56.3	113	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-BS	W17429.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	57.3	115	40-140
67-72-1	Hexachloroethane	50	26.6	53	40-140
78-59-1	Isophorone	50	41.9	84	40-140
88-74-4	2-Nitroaniline	50	43.7	87	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	40.3	81	40-140
62-75-9	n-Nitrosodimethylamine	50	33.6	67	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	41.7	83	40-140
86-30-6	N-Nitrosodiphenylamine	50	43.5	87	40-140
110-86-1	Pyridine	50	27.7	55	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	50%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	108%	15-110%
4165-60-0	Nitrobenzene-d5	71%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	99%	30-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36653-BS	R36827.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27828-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	48.1	96	40-140
208-96-8	Acenaphthylene	50	37.8	76	40-140
120-12-7	Anthracene	50	51.3	103	40-140
56-55-3	Benzo(a)anthracene	50	63.0	126	40-140
50-32-8	Benzo(a)pyrene	50	46.7	93	40-140
205-99-2	Benzo(b)fluoranthene	50	51.7	103	40-140
191-24-2	Benzo(g,h,i)perylene	50	54.1	108	40-140
207-08-9	Benzo(k)fluoranthene	50	53.4	107	40-140
218-01-9	Chrysene	50	56.0	112	40-140
53-70-3	Dibenzo(a,h)anthracene	50	56.5	113	40-140
206-44-0	Fluoranthene	50	57.5	115	40-140
86-73-7	Fluorene	50	51.0	102	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	55.9	112	40-140
90-12-0	1-Methylnaphthalene	50	41.4	83	40-140
91-57-6	2-Methylnaphthalene	50	40.0	80	40-140
85-01-8	Phenanthrene	50	52.9	106	40-140
129-00-0	Pyrene	50	58.0	116	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	88%	30-130%
321-60-8	2-Fluorobiphenyl	67%	30-130%
1718-51-0	Terphenyl-d14	82%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-MS	W17430.D	1	01/29/14	KR	01/28/14	OP36652	MSW766
OP36652-MSD	W17431.D	1	01/29/14	KR	01/28/14	OP36652	MSW766
MC27500-23	W17432.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	MC27500-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	23.9	48	21.6	43	10	30-130/20
95-57-8	2-Chlorophenol	ND		50	43.4	87	39.1	78	10	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	42.6	85	38.1	76	11	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	43.4	87	39.1	78	10	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	39.2	78	34.9	70	12	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	38.9	78	37.0	74	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	52.9	106	50.2	100	5	30-130/20
95-48-7	2-Methylphenol	ND		50	38.2	76	33.2	66	14	30-130/20
	3&4-Methylphenol	ND		100	68.4	68	60.9	61	12	30-130/20
88-75-5	2-Nitrophenol	ND		50	45.2	90	40.6	81	11	30-130/20
100-02-7	4-Nitrophenol	ND		50	16.4	33	14.9	30	10	30-130/20
87-86-5	Pentachlorophenol	ND		50	44.9	90	42.0	84	7	30-130/20
108-95-2	Phenol	ND		50	18.9	38	16.9	34	11	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.3	89	39.9	80	10	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	44.0	88	40.1	80	9	30-130/20
62-53-3	Aniline	ND		50	28.8	58	25.6	51	12	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	60.7	121	56.5	113	7	40-140/20
85-68-7	Butyl henzyl phthalate	ND		50	49.4	99	46.2	92	7	40-140/20
100-51-6	Benzyl Alcohol	ND		50	40.2	80	35.9	72	11	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	44.6	89	39.2	78	13	40-140/20
106-47-8	4-Chloroaniline	ND		50	42.0	84	37.8	76	11	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	37.0	74	32.9	66	12	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	49.4	99	44.3	89	11	40-140/20
108-60-1	his(2-Chloroisopropyl)ether	ND		50	101	202* [a]	90.8	182* [a]	11	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	51.4	103	45.5	91	12	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	49.1	98	45.0	90	9	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	48.9	98	45.0	90	8	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	48.3	97	42.8	86	12	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	45.8	92	43.6	87	5	40-140/20
132-64-9	Dibenzofuran	ND		50	47.4	95	42.1	84	12	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	45.6	91	42.8	86	6	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	47.8	96	44.2	88	8	40-140/20
84-66-2	Diethyl phthalate	ND		50	44.8	90	40.6	81	10	40-140/20
131-11-3	Dimethyl phthalate	ND		50	41.1	82	38.4	77	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	52.2	104	48.7	97	7	40-140/20
118-74-1	Hexachlorobenzene	ND		50	61.7	123	57.0	114	8	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36652-MS	W17430.D	1	01/29/14	KR	01/28/14	OP36652	MSW766
OP36652-MSD	W17431.D	1	01/29/14	KR	01/28/14	OP36652	MSW766
MC27500-23	W17432.D	1	01/29/14	KR	01/28/14	OP36652	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27828-1

CAS No.	Compound	MC27500-23 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	64.3	129	54.7	109	16	40-140/20
67-72-1	Hexachloroethane	ND		50	30.1	60	27.1	54	10	40-140/20
78-59-1	Isophorone	ND		50	46.6	93	40.8	82	13	40-140/20
88-74-4	2-Nitroaniline	ND		50	49.1	98	44.1	88	11	40-140/20
99-09-2	3-Nitroaniline	ND		50	44.4	89	41.3	83	7	40-140/20
100-01-6	4-Nitroaniline	ND		50	46.0	92	41.6	83	10	40-140/20
98-95-3	Nitrobenzene	ND		50	44.4	89	39.1	78	13	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	36.4	73	32.3	65	12	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	45.0	90	40.4	81	11	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	46.2	92	43.4	87	6	40-140/20
110-86-1	Pyridine	ND		50	31.0	62	26.6	53	15	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-23	Limits
367-12-4	2-Fluorophenol	53%	48%	46%	15-110%
4165-62-2	Phenol-d5	35%	31%	30%	15-110%
118-79-6	2,4,6-Tribromophenol	114%* [b]	110%	96%	15-110%
4165-60-0	Nitrobenzene-d5	76%	68%	64%	30-130%
321-60-8	2-Fluorobiphenyl	79%	68%	67%	30-130%
1718-51-0	Terphenyl-d14	102%	96%	98%	30-130%

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Associated target analytes are non-detect.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36653-MS	R36828.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358
OP36653-MSD	R36829.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358
MC27500-24	R36830.D	1	01/29/14	KR	01/28/14	OP36653	MSR1358

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27828-1

CAS No.	Compound	MC27500-24 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	52.7	105	47.4	95	11	40-140/20
208-96-8	Acenaphthylene	ND		50	41.4	83	37.0	74	11	40-140/20
120-12-7	Anthracene	ND		50	55.3	111	50.6	101	9	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	66.6	133	63.6	127	5	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	49.5	99	46.6	93	6	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	56.2	112	52.9	106	6	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	57.3	115	54.3	109	5	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	58.4	117	54.6	109	7	40-140/20
218-01-9	Chrysene	ND		50	59.1	118	56.3	113	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	59.5	119	56.5	113	5	40-140/20
206-44-0	Fluoranthene	ND		50	60.9	122	57.1	114	6	40-140/20
86-73-7	Fluorene	ND		50	55.8	112	50.5	101	10	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	58.8	118	55.7	111	5	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	45.2	90	40.8	82	10	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	44.0	88	39.4	79	11	40-140/20
85-01-8	Phenanthrene	ND		50	56.7	113	51.9	104	9	40-140/20
129-00-0	Pyrene	ND		50	61.4	123	57.4	115	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27500-24	Limits
4165-60-0	Nitrobenzene-d5	95%	85%	80%	30-130%
321-60-8	2-Fluorobiphenyl	77%	68%	66%	30-130%
1718-51-0	Terphenyl-d14	85%	80%	85%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1358-CC1261	Injection Date:	01/29/14
Lab File ID:	R36824.D	Injection Time:	15:42
Instrument ID:	GCMSR	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	472115	4.28	1570268	5.33	910069	6.87	1484283	8.29	1152699	11.06	2089041	12.56
Upper Limit [a]	944230	4.78	3140536	5.83	1820138	7.37	2968566	8.79	2305398	11.56	4178082	13.06
Lower Limit [b]	236058	3.78	785134	4.83	455035	6.37	742142	7.79	576350	10.56	1044521	12.06
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
ZZZZZZ	512647	4.28	1700715	5.33	969542	6.87	1564024	8.28	1242041	11.06	2262141	12.56
OP36653-MB	459284	4.28	1498050	5.33	855165	6.87	1384019	8.28	1081521	11.06	1997589	12.56
OP36653-BS	466861	4.28	1517891	5.33	858778	6.87	1388008	8.29	1121286	11.06	2006854	12.56
OP36653-MS	429981	4.28	1403442	5.33	794220	6.87	1283466	8.29	1036099	11.06	1841539	12.56
OP36653-MSD	459293	4.28	1504166	5.33	856281	6.87	1392908	8.29	1128857	11.06	2052483	12.56
MC27500-24	451371	4.28	1480714	5.33	845442	6.87	1370852	8.28	1071893	11.06	1996027	12.56
MC27828-1	441885	4.28	1430269	5.33	823390	6.87	1349022	8.28	1022472	11.06	1879296	12.56
ZZZZZZ	394716	4.28	1321119	5.33	764533	6.87	1243793	8.28	998777	11.06	1865325	12.56
ZZZZZZ	401765	4.28	1354541	5.33	782097	6.87	1264255	8.28	1025084	11.06	1934413	12.56
ZZZZZZ	416369	4.28	1402207	5.33	802515	6.87	1300044	8.28	1031285	11.06	1929277	12.56
ZZZZZZ	406852	4.28	1359715	5.33	783128	6.87	1257430	8.28	1012516	11.06	1895349	12.56
ZZZZZZ	434505	4.28	1452948	5.33	833782	6.87	1353910	8.28	1080646	11.06	1975027	12.56
ZZZZZZ	453990	4.28	1518775	5.33	877823	6.87	1436586	8.28	1131663	11.06	2029654	12.56
ZZZZZZ	472213	4.28	1575892	5.33	903918	6.87	1469976	8.28	1180411	11.06	2203721	12.56
ZZZZZZ	456877	4.28	1515614	5.33	870008	6.87	1413640	8.28	1123776	11.06	2042345	12.56
ZZZZZZ	430410	4.28	1444270	5.33	821898	6.87	1324712	8.28	1051728	11.06	1921489	12.56
ZZZZZZ	426003	4.28	1427511	5.33	823198	6.87	1326353	8.28	1066966	11.06	1933615	12.56
ZZZZZZ	458080	4.28	1534696	5.33	880475	6.87	1425514	8.28	1129809	11.06	2065224	12.56
ZZZZZZ	439556	4.28	1469874	5.33	847497	6.87	1370608	8.28	1088699	11.06	1983846	12.56
ZZZZZZ	438535	4.28	1468805	5.33	839525	6.87	1351603	8.28	1077521	11.05	1974255	12.56
ZZZZZZ	423879	4.28	1409170	5.33	815159	6.87	1320245	8.28	1056337	11.06	1927803	12.56
ZZZZZZ	447444	4.28	1499968	5.33	864694	6.87	1398181	8.28	1125484	11.06	2071681	12.56
ZZZZZZ	425541	4.28	1426345	5.33	825847	6.87	1333002	8.28	1086830	11.06	2016433	12.56

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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW766-CC729	Injection Date:	01/29/14
Lab File ID:	W17427.D	Injection Time:	07:28
Instrument ID:	GCMSW	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	58298	4.47	220682	5.54	150861	7.08	259343	8.38	266543	11.08	243310	12.86
Upper Limit [a]	116596	4.97	441364	6.04	301722	7.58	518686	8.88	533086	11.58	486620	13.36
Lower Limit [b]	29149	3.97	110341	5.04	75431	6.58	129672	7.88	133272	10.58	121655	12.36
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
OP36652-MB	60792	4.47	225349	5.53	151942	7.08	253325	8.37	253917	11.08	236094	12.85
OP36652-BS	60215	4.47	220576	5.54	147686	7.08	256663	8.37	250177	11.08	228918	12.85
OP36652-MS	58080	4.47	212484	5.54	140662	7.08	244104	8.37	239065	11.08	218464	12.85
OP36652-MSD	62695	4.47	232127	5.54	155212	7.08	262624	8.37	261207	11.08	241944	12.85
MC27500-23	63224	4.47	238070	5.54	158607	7.08	273509	8.37	268697	11.08	253727	12.85
OP36688-MB	67588	4.47	250359	5.53	167692	7.08	279360	8.37	266344	11.08	240893	12.85
OP36688-BS	71174	4.47	264933	5.54	174277	7.08	287753	8.38	272508	11.08	247611	12.85
ZZZZZZ	64927	4.47	235983	5.53	151710	7.08	253360	8.37	228584	11.08	201993	12.85
MC27828-1	58374	4.47	215792	5.53	143816	7.08	238029	8.37	240010	11.08	225891	12.85
ZZZZZZ	62062	4.47	228203	5.53	148291	7.08	248497	8.37	244505	11.08	232108	12.85
OP36679-MB	62128	4.47	229071	5.53	152600	7.08	259121	8.37	254909	11.08	241274	12.85
OP36679-BS	63196	4.47	233406	5.54	156001	7.08	263963	8.37	255257	11.08	242735	12.85
ZZZZZZ	65602	4.47	242036	5.53	161933	7.08	272438	8.37	267153	11.08	255143	12.85
ZZZZZZ	66056	4.47	244694	5.53	163229	7.08	270676	8.37	265338	11.08	249514	12.85
ZZZZZZ	62028	4.47	234468	5.53	154033	7.08	260005	8.37	267622	11.08	247047	12.85
OP36666-MB	59445	4.47	220292	5.53	144019	7.08	243236	8.37	237610	11.08	223925	12.85
OP36666-BS	61534	4.47	221397	5.54	146713	7.08	246662	8.37	244089	11.08	228575	12.85
OP36666-BSD	63939	4.47	233986	5.54	152659	7.08	263868	8.37	255904	11.08	240028	12.85
ZZZZZZ	62056	4.47	225175	5.53	147479	7.08	246231	8.37	247144	11.07	233285	12.85

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 Surrogate Recovery Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27828-1	W17436.D	42.0	31.0	111.0* [a]	67.0	64.0	98.0
OP36652-BS	W17429.D	50.0	33.0	108.0	71.0	68.0	99.0
OP36652-MB	W17428.D	35.0	23.0	77.0	49.0	50.0	98.0
OP36652-MS	W17430.D	53.0	35.0	114.0* [a]	76.0	79.0	102.0
OP36652-MSD	W17431.D	48.0	31.0	110.0	68.0	68.0	96.0

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. Associated target analytes are non-detect.

Semivolatile Surrogate Recovery Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27828-1	R36831.D	84.0	64.0	86.0
OP36653-BS	R36827.D	88.0	67.0	82.0
OP36653-MB	R36826.D	61.0	49.0	85.0
OP36653-MS	R36828.D	95.0	77.0	85.0
OP36653-MSD	R36829.D	85.0	68.0	80.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-MB	BB54168.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27828-1, MC27828-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	76%	36-173%
460-00-4	Bromofluorobenzene (S)	67%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-BS	BB54169.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27828-1, MC27828-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.053	75	60-140
106-93-4	1,2-Dibromoethane	0.071	0.050	70	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	82%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-MS	BB54170.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162
OP36674-MSD	BB54171.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
MC27800-5	BB54172.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27828-1, MC27828-3

CAS No.	Compound	MC27800-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.052	73	0.055	77	6	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.046	65	0.049	69	6	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-5	Limits
460-00-4	Bromofluorobenzene (S)	84%	83%	55%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	65%	50%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27828-1	BB54177.D	85.0	69.0
MC27828-3	BB54179.D	84.0	72.0
OP36674-BS	BB54169.D	82.0	71.0
OP36674-MB	BB54168.D	76.0	67.0
OP36674-MS	BB54170.D	84.0	63.0
OP36674-MSD	BB54171.D	83.0	65.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3162-ICC3162	Injection Date:	01/28/14
Lab File ID:	BB54163.D	Injection Time:	20:54
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.92	4.14

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB54166A.D	01/28/14	22:05	4.92	4.14
OP36674-MB	BB54168.D	01/28/14	22:54	4.91	4.14
OP36674-BS	BB54169.D	01/28/14	23:18	4.91	4.14
OP36674-MS	BB54170.D	01/28/14	23:43	4.91	4.14
OP36674-MSD	BB54171.D	01/29/14	00:07	4.91	4.14
MC27800-5	BB54172.D	01/29/14	00:31	4.91	4.14
ZZZZZZ	BB54173.D	01/29/14	00:55	4.90	4.14
ZZZZZZ	BB54174.D	01/29/14	01:20	4.91	4.14
ZZZZZZ	BB54175.D	01/29/14	01:44	4.90	4.14
ZZZZZZ	BB54176.D	01/29/14	02:08	4.90	4.14
MC27828-1	BB54177.D	01/29/14	02:32	4.90	4.14

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Reteution time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC27828
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3162-CC3162	Injection Date:	01/29/14
Lab File ID:	BB54178.D	Injection Time:	02:56
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.90	4.14

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC27828-3	BB54179.D	01/29/14	03:20	4.90	4.14
ZZZZZZ	BB54180.D	01/29/14	03:45	4.89	4.14
ZZZZZZ	BB54181.D	01/29/14	04:09	4.91	4.14
ZZZZZZ	BB54182.D	01/29/14	04:33	4.90	4.14
ZZZZZZ	BB54183.D	01/29/14	04:57	4.92	4.14
GBB3162-ECC316	BB54184.D	01/29/14	05:21	4.91	4.14

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC27893

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P74-ROX-012414	P93C-ROX-012414
T12-ROX-012414	TB-ROX-012414-HCL
TB-ROX-012414-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the PAH compound phenanthrene was detected in the method blank; acetone was detected in the trip blank. VOC and SVOC LCS/LCSD recoveries were outside evaluation criteria. SVOC surrogate 2,4,6-tribromophenol was outside evaluation criteria in LCS OP3666-BS. VOC MS/MSD recoveries were outside evaluation criteria in sample P93C-ROX-012414. The internal standard area recovery for tert butyl alcohol-d_9 was outside criteria in sample T12-ROX-012414. Samples P74-ROX-012414 and T12-ROX-012414 were diluted due to high levels of VOC target analytes. These issues are addressed further in the appropriate sections below. Additionally, the initial and continuing calibration verifications for acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D) and 40%D, respectively. The initial calibration verification for aniline and bis(2-chloroisopropyl)ether exceeded 30%D.

The cooler receipt form indicated that one of one cooler was received by the laboratory at a temperature of 0.4ºC, 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
TB-ROX-012414-HCL	VOCs	Acetone	5.7 µg/L
OP36668-MB	PAHs	1-Methylnaphthalene	0.052 µg/L
OP36668-MB	PAHs	Phenanthrene	0.029 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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P74-ROX-012414	PAHs	Phenanthrene	0.14 µg/L	**U**

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
MSV1034-BS/BSD	VOCs	Acrolein	**167/166**	1	70-130/25
MSV1034-BS/BSD	VOCs	Chloroethane	**131**/127	3	70-130/25
MSV1034-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**145/192**	**28**	70-130/25
MSV1034-BS/BSD	VOCs	2,2-Dichloropropane	**134/132**	2	70-130/25
MSV1034-BS/BSD	VOCs	Trichlorofluoromethane	**138/133**	4	70-130/25
MSV1035-BS/BSD	VOCs	Acrolein	**159/175**	10	70-130/25
MSV1035-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**478/822**	**53**	70-130/25
OP36666-BS/BSD	SVOCs	bis(2-Chloroisopropyl)ether	**208/200**	4	40-140/20

Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. MSV1034-BS/BSD was associated with the trip blank. Trip blanks are quality control samples and are not qualified. No qualification of data was required.

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
OP3666-BS	SVOCs	2,4,6-Tribromophenol	**114**	15-110

LCS OP3666-BS is a quality control sample and is not qualified. No qualification of data was required.

7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

Were MS/MSD samples analyzed as part of this SDG?

Yes, although not requested, sample P93C-ROX-012414 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
P93C-ROX-012414	VOCs	Acetone	**57/60**	5	70-130/30
P93C-ROX-012414	VOCs	Acrolein	**136/136**	0	70-130/30
P93C-ROX-012414	VOCs	2-Chloroethyl vinyl ether	81/**6**	**174**	70-130/30
P93C-ROX-012414	VOCs	2,2-Dichloropropane	**136**/128	5	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of compounds 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
T12-ROX-012414	VOCs	Tert butyl alcohol-d_9	**524580**	71121-284482

No target analytes were associated with tert butyl alcohol-d_9; therefore, no qualification of data were required.

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

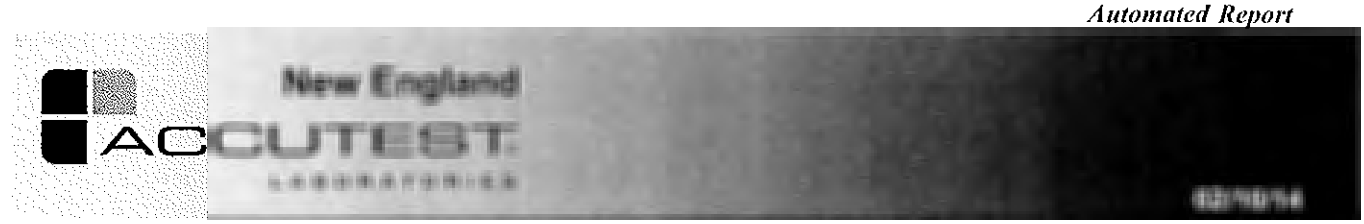
For samples that were diluted and nondetect, were undiluted results also reported?

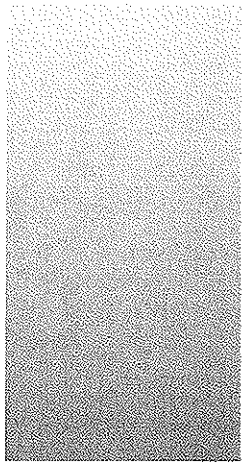
Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No





Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27893

Sampling Date: 01/24/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **82**

Reviewed on 2/27/2014 MM

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: MC27893

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27893-1	01/24/14	12:05	DMDC	01/25/14	AQ	Ground Water	P74-ROX-012414
MC27893-2	01/24/14	15:00	DMDC	01/25/14	AQ	Ground Water	P93C-ROX-012414
MC27893-3	01/24/14	16:05	DMDC	01/25/14	AQ	Ground Water	T12-ROX-012414
MC27893-4	01/24/14	00:00	DMDC	01/25/14	AQ	Trip Blank Water	TB-ROX-012414-HCL
MC27893-5	01/24/14	00:00	DMDC	01/25/14	AQ	Trip Blank Water	TB-ROX-012414-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27893
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/7/2014 1:18:52 PM

3 Sample(s), 2 Trip Blank(s) were collected on 01/24/2014 and were received at Accutest on 01/25/2014 properly preserved, at 0.4 Deg. C and intact. These Samples received an Accutest job number of MC27893. 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:** MSV1034

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27897-1MS, MC27897-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1034-BS Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Chloroethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- MSV1034-BSD Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Acrolein are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD of MSV1034-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Blank Spike meets program technical requirements.
- MSV1034-BS/BSD for Acrolein: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Continuing calibration standard MSV1034-CC1019 for acrolein, 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds.

Matrix AQ **Batch ID:** MSV1035

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27893-2MS, MC27893-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MSV1035-BS/BSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Associated samples are non-detect for this compound.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, Acetone, Acrolein 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 MC27893-2MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- RPD of MSV1035-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1035-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36666

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27800-1MS, MC27800-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 2,4-Dinitrophenol are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dimethylphenol, Dimethyl phthalate are outside control limits for sample OP36666-MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- Initial calibration verification MSW729-ICV729 for Aniline, bis(2-chloroisopropyl)ether exceed 30% Difference. These compounds are within criteria in continuing calibration check MSW766-CC729, MSW767-CC729.
- OP36666-BS/MS/MSD for bis(2-Chloroisopropyl)ether: Outside control limits. Associated samples are non-detect for this compound.
- OP36666-BS for 2,4,6-Tribromophenol: Outside control limits. Associated target analytes are non-detect.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36668

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27800-2MS, MC27800-2MSD were used as the QC samples indicated.
- Sample(s) MC27893-1 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: OP36674

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27800-5MS, MC27800-5MSD 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(MC27893).

Summary of Hits

Job Number: MC27893
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/24/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27893-1	P74-ROX-012414					
Benzene		4450	50	45	ug/l	SW846 8260C
n-Butylbenzene		25.2	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		3.1 J	5.0	0.58	ug/l	SW846 8260C
Ethylbenzene		115	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		5.8	5.0	0.64	ug/l	SW846 8260C
p-Isopropyltoluene		3.1 J	5.0	0.55	ug/l	SW846 8260C
Naphthalene		32.2	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		11.2	5.0	0.59	ug/l	SW846 8260C
Toluene		153	1.0	0.46	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		292	5.0	0.47	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		110	5.0	1.1	ug/l	SW846 8260C
m,p-Xylene		316	1.0	0.70	ug/l	SW846 8260C
o-Xylene		57.9	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		374	1.0	0.41	ug/l	SW846 8260C
Phenol		27.8	5.1	0.52	ug/l	SW846 8270D
Butyl benzyl phthalate		0.97 J	5.1	0.87	ug/l	SW846 8270D
Di-n-butyl phthalate		0.48 J	5.1	0.40	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.63 J	2.0	0.50	ug/l	SW846 8270D
Acenaphthene		0.23	0.10	0.070	ug/l	SW846 8270D BY SIM
Fluoranthene		0.088 J	0.10	0.041	ug/l	SW846 8270D BY SIM
Fluorene		0.28	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		8.8	0.20	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		10.6	0.20	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		0.14 B	0.051	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.049 J	0.10	0.039	ug/l	SW846 8270D BY SIM
MC27893-2	P93C-ROX-012414					
Methyl Tert Butyl Ether		4.7	1.0	0.43	ug/l	SW846 8260C
Di-n-butyl phthalate		0.51 J	5.1	0.40	ug/l	SW846 8270D
MC27893-3	T12-ROX-012414					
Benzene		2480	10	9.0	ug/l	SW846 8260C
n-Butylbenzeue		8.3	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		2.9 J	5.0	0.58	ug/l	SW846 8260C
Ethylbenzene		518	20	7.5	ug/l	SW846 8260C
Isopropylbenzene		36.2	5.0	0.64	ug/l	SW846 8260C
Naphthalene		171	5.0	0.79	ug/l	SW846 8260C
n-Propylbenzene		67.6	5.0	0.59	ug/l	SW846 8260C
Toluene		421	20	9.2	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		526	100	9.3	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		50.7	5.0	1.1	ug/l	SW846 8260C

Summary of Hits

Job Number: MC27893
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/24/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene		1120	20	14	ug/l	SW846 8260C
o-Xylene		46.9	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		1230	20	8.2	ug/l	SW846 8260C
2,4-Dimethylphenol		7.3 J	10	1.2	ug/l	SW846 8270D
2-Methylphenol		2.2 J	10	1.3	ug/l	SW846 8270D
Phenol		49.8	5.1	0.52	ug/l	SW846 8270D
Di-n-butyl phthalate		0.44 J	5.1	0.40	ug/l	SW846 8270D
Acenaphthene		0.50	0.10	0.070	ug/l	SW846 8270D BY SIM
Anthracene		0.14	0.10	0.094	ug/l	SW846 8270D BY SIM
Fluorene		0.35	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		21.5	0.20	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		32.6	0.20	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		1.0	0.051	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.060 J	0.10	0.039	ug/l	SW846 8270D BY SIM
MC27893-4	TB-ROX-012414-HCL					
Acetone		5.7 J	10	2.8	ug/l	SW846 8260C
MC27893-5	TB-ROX-012414-ST					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P74-ROX-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27401.D	1	01/28/14	AMY	n/a	n/a	MSV1034
Run #2	V27440.D	100	01/29/14	AMY	n/a	n/a	MSV1035

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	4450 [a]	50	45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	25.2	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	3.1	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	115	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	5.8	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	3.1	5.0	0.55	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	32.2	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	11.2	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	153	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	292	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzeue	110	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	316	1.0	0.70	ug/l	
95-47-6	o-Xylene	57.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	374	1.0	0.41	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 iu associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P74-ROX-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	101%	70-130%
2037-26-5	Toluene-D8	93%	97%	70-130%
460-00-4	4-Bromofluorobenzene	106%	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:	P74-ROX-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17467.D	1	01/29/14	KR	01/27/14	OP36666	MSW767
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	27.8	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl henzyl phthalate	0.97	5.1	0.87	ug/l	J
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.48	5.1	0.40	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	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-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.63	2.0	0.50	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	39%		15-110%
4165-62-2	Phenol-d5	27%		15-110%
118-79-6	2,4,6-Tribromophenol	108%		15-110%
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	64%		30-130%
1718-51-0	Terphenyl-d14	84%		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:	P74-ROX-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87126.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.23	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	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	0.033	ug/l	
206-44-0	Fluoranthene	0.088	0.10	0.041	ug/l	J
86-73-7	Fluorene	0.28	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	8.8	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	10.6	0.20	0.076	ng/l	
85-01-8	Phenanthrene	~~0.14~~ 0.14	~~0.051~~ 0.10	0.013	ug/l	B U
129-00-0	Pyrene	0.049	0.10	0.039	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	66%		30-130%
321-60-8	2-Fluorobiphenyl	60%		30-130%
1718-51-0	Terphenyl-d14	76%		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-012414		
Lab Sample ID:	MC27893-1	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54180.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0051	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	89%		36-173%
460-00-4	Bromofluorobenzene (S)	64%		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-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethaue	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorohenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	P93C-ROX-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	4.7	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	98%		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:	P93C-ROX-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17468.D	1	01/30/14	KR	01/27/14	OP36666	MSW767
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.51	5.1	0.40	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	ug/l	

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

Report of Analysis

Client Sample ID:	P93C-ROX-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 Soutb Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl pbthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrohenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	44%		15-110%
4165-62-2	Phenol-d5	31%		15-110%
118-79-6	2,4,6-Tribromophenol	105%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	71%		30-130%
1718-51-0	Terphenyl-d14	80%		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:	P93C-ROX-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87127.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	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	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	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	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.076	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	71%		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:	P93C-ROX-012414		
Lab Sample ID:	MC27893-2	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54181.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		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:	T12-ROX-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27403.D	1	01/28/14	AMY	n/a	n/a	MSV1034
Run #2	V27439.D	20	01/29/14	AMY	n/a	n/a	MSV1035

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	2480 [a]	10	9.0	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	8.3	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	2.9	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	518 [a]	20	7.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	36.2	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	171	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	67.6	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	421 [a]	20	9.2	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethaue	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethaue	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	526 [a]	100	9.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	50.7	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	1120 [a]	20	14	ug/l	
95-47-6	o-Xylene	46.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	1230 [a]	20	8.2	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-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	97%	70-130%
2037-26-5	Toluene-D8	92%	98%	70-130%
460-00-4	4-Bromofluorobenzene	105%	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:	T12-ROX-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17469.D	1	01/30/14	KR	01/27/14	OP36666	MSW767
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	7.3	10	1.2	ng/l	J
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	2.2	10	1.3	ug/l	J
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	49.8	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphtbalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Cbloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.44	5.1	0.40	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	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-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ng/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	29%		15-110%
4165-62-2	Phenol-d5	25%		15-110%
118-79-6	2,4,6-Tribromophenol	96%		15-110%
4165-60-0	Nitrobenzene-d5	65%		30-130%
321-60-8	2-Fluorobiphenyl	69%		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:	T12-ROX-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87128.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.50	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	0.14	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	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	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	0.35	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	21.5	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	32.6	0.20	0.076	ug/l	
85-01-8	Phenanthrene	1.0	0.051	0.013	ug/l	
129-00-0	Pyrene	0.060	0.10	0.039	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	64%		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 blauk
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	T12-ROX-012414		
Lab Sample ID:	MC27893-3	Date Sampled:	01/24/14
Matrix:	AQ - Ground Water	Date Received:	01/25/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54182.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	81%		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:	TB-ROX-012414-HCL		
Lab Sample ID:	MC27893-4	Date Sampled:	01/24/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27399.D	1	01/28/14	AMY	n/a	n/a	MSV1034
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	5.7	10	2.8	ug/l	J
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanuue (MEK)	ND	5.0	1.6	ug/l	
104-51-8	u-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012414-HCL		
Lab Sample ID:	MC27893-4	Date Sampled:	01/24/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-012414-HCL		
Lab Sample ID:	MC27893-4	Date Sampled:	01/24/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/25/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		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	

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-012414-ST		
Lab Sample ID:	MC27893-5	Date Sampled:	01/24/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/25/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54183.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

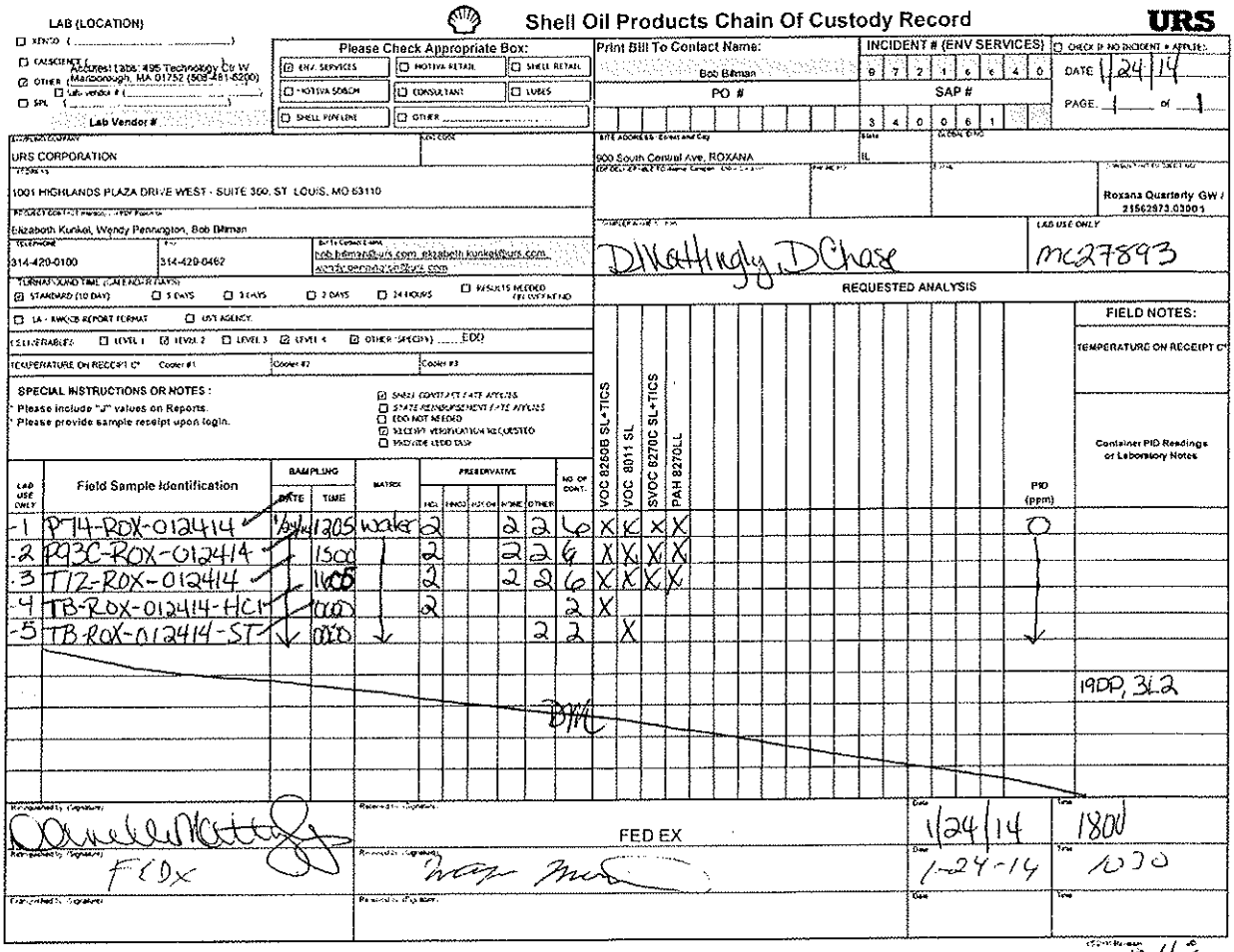
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	78%		36-173%
460-00-4	Bromofluorobenzene (S)	68%		36-173%

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

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 Ctr 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 SOBCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

☐ CHECK IF NO INCIDENT # APPLIES

DATE 1/24/14

PO #

SAP # 3 4 0 0 6 1

PAGE 1 of 1

COMPANY	URS CORPORATION
ADDRESS	1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
PROJECT CONTACT	Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE	314-429-0100
FAX	314-429-0462
BILL TO CONTACT	bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com
SITE ADDRESS	900 South Central Ave, ROXANA
STATE	IL
GLOBAL ID NO.	
COMPLETION SHEET NO.	Roxana Quarterly GW / 21562973.03001
COMPLETION TIME	D Mattingly, D Chase
LAB USE ONLY	MC27893

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (IN 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 REIMBURSEMENT RATE APPLIES
☐ EDD 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 HCL	PRESERVATIVE HNO3	PRESERVATIVE H2SO4	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P74-ROX-012414	1/24/14	1205	water	2			2	2	6	X	X	X	X	0	
-2	P93C-ROX-012414		1500		2			2	2	6	X	X	X	X		
-3	T12-ROX-012414		1605		2			2	2	6	X	X	X	X		
-4	TB-ROX-012414-HCl		0000		2					2	X					
-5	TB-ROX-012414-ST		0000						2	2		X				
																19DP, 3L2

DM

Relinquished by (Signature): [signature]	Received by (Signature): FED EX	Date: 1/24/14	Time: 1800
Relinquished by (Signature): FEDx	Received by (Signature): [signature]	Date: 1-24-14	Time: 1030
Transmitted by (Signature):	Received by (Signature):	Date:	Time:

COOLER RECEIPT: 0.4°C

5.1

5

MC27893: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27893 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/25/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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

MC27893: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27893

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27893-1 Collected: 24-JAN-14 12:05 By: DMDC Received: 25-JAN-14 By: P74-ROX-012414						
MC27893-1	SW846 8260C	28-JAN-14 14:46	AMY			V8260SL+
MC27893-1	SW846 8011	29-JAN-14 03:45	CZ	27-JAN-14	TA	V8011SL
MC27893-1	SW846 8260C	29-JAN-14 18:06	AMY			V8260SL+
MC27893-1	SW846 8270D	29-JAN-14 23:40	KR	27-JAN-14	MD	AB8270SL+
MC27893-1	SW846 8270D BY SIM	30-JAN-14 17:27	KR	27-JAN-14	MD	B8270SIMSL
MC27893-2 Collected: 24-JAN-14 15:00 By: DMDC Received: 25-JAN-14 By: P93C-ROX-012414						
MC27893-2	SW846 8011	29-JAN-14 04:09	CZ	27-JAN-14	TA	V8011SL
MC27893-2	SW846 8260C	29-JAN-14 14:34	AMY			V8260SL+
MC27893-2	SW846 8270D	30-JAN-14 00:04	KR	27-JAN-14	MD	AB8270SL+
MC27893-2	SW846 8270D BY SIM	30-JAN-14 17:49	KR	27-JAN-14	MD	B8270SIMSL
MC27893-3 Collected: 24-JAN-14 16:05 By: DMDC Received: 25-JAN-14 By: T12-ROX-012414						
MC27893-3	SW846 8260C	28-JAN-14 15:39	AMY			V8260SL+
MC27893-3	SW846 8011	29-JAN-14 04:33	CZ	27-JAN-14	TA	V8011SL
MC27893-3	SW846 8260C	29-JAN-14 17:39	AMY			V8260SL+
MC27893-3	SW846 8270D	30-JAN-14 00:28	KR	27-JAN-14	MD	AB8270SL+
MC27893-3	SW846 8270D BY SIM	30-JAN-14 18:14	KR	27-JAN-14	MD	B8270SIMSL
MC27893-4 Collected: 24-JAN-14 00:00 By: DMDC Received: 25-JAN-14 By: TB-ROX-012414-HCL						
MC27893-4	SW846 8260C	28-JAN-14 13:53	AMY			V8260SL+
MC27893-5 Collected: 24-JAN-14 00:00 By: DMDC Received: 25-JAN-14 By: TB-ROX-012414-ST						
MC27893-5	SW846 8011	29-JAN-14 04:57	CZ	27-JAN-14	TA	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/25/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27893-1.3	VOC Ref #3	Amy Min Yang	01/29/14 12:56	Retrieve from Storage
MC27893-1.3	Amy Min Yang	GCMSV	01/29/14 12:56	Load on Instrument
MC27893-1.3	GCMSV	Amy Min Yang	01/30/14 10:05	Unload from Instrument
MC27893-1.3	Amy Min Yang	VOC Ref #3	01/30/14 10:05	Return to Storage
MC27893-1.4	VOC Ref #3	Amy Min Yang	01/28/14 13:17	Retrieve from Storage
MC27893-1.4	Amy Min Yang	GCMSV	01/28/14 13:17	Load on Instrument
MC27893-1.4	GCMSV	Amy Min Yang	01/29/14 12:54	Unload from Instrument
MC27893-1.4	Amy Min Yang	VOC Ref #3	01/29/14 12:54	Return to Storage
MC27893-1.6	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage
MC27893-2.3	VOC Ref #3	Amy Min Yang	01/28/14 13:17	Retrieve from Storage
MC27893-2.3	Amy Min Yang	GCMSV	01/28/14 13:17	Load on Instrument
MC27893-2.3	GCMSV	Amy Min Yang	01/29/14 12:54	Unload from Instrument
MC27893-2.3	Amy Min Yang	VOC Ref #3	01/29/14 12:54	Return to Storage
MC27893-2.4	VOC Ref #3	Amy Min Yang	01/29/14 12:56	Retrieve from Storage
MC27893-2.4	Amy Min Yang	GCMSV	01/29/14 12:56	Load on Instrument
MC27893-2.4	GCMSV	Amy Min Yang	01/30/14 10:05	Unload from Instrument
MC27893-2.4	Amy Min Yang	VOC Ref #3	01/30/14 10:05	Return to Storage
MC27893-2.6	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage
MC27893-3.3	VOC Ref #3	Amy Min Yang	01/28/14 13:17	Retrieve from Storage
MC27893-3.3	Amy Min Yang	GCMSV	01/28/14 13:17	Load on Instrument
MC27893-3.3	GCMSV	Amy Min Yang	01/29/14 12:54	Unload from Instrument
MC27893-3.3	Amy Min Yang	VOC Ref #3	01/29/14 12:54	Return to Storage
MC27893-3.4	VOC Ref #3	Amy Min Yang	01/29/14 12:56	Retrieve from Storage
MC27893-3.4	Amy Min Yang	GCMSV	01/29/14 12:56	Load on Instrument
MC27893-3.4	GCMSV	Amy Min Yang	01/30/14 10:05	Unload from Instrument
MC27893-3.4	Amy Min Yang	VOC Ref #3	01/30/14 10:05	Return to Storage
MC27893-3.6	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage
MC27893-4.1	VOC Ref #3	Amy Min Yang	01/28/14 13:17	Retrieve from Storage
MC27893-4.1	Amy Min Yang	GCMSV	01/28/14 13:17	Load on Instrument
MC27893-4.1	GCMSV	Amy Min Yang	01/29/14 12:54	Unload from Instrument
MC27893-4.1	Amy Min Yang	VOC Ref #3	01/29/14 12:54	Return to Storage
MC27893-5.1	VOC Ref #3	Marc Tahtamoni	01/27/14 13:55	Retrieve from Storage

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-MB	V27398.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-MB	V27398.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-MB	V27398.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	113%	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	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	u-Propylhenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobeuzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethaue	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xyleue (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-MB	V27429.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-BS	V27394.D	1	01/28/14	AMY	n/a	n/a	MSV1034
MSV1034-BSD	V27395.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	48.7	97	52.8	106	8	70-130/25
107-02-8	Acrolein	50	83.5	167* a	82.8	166* a	1	70-130/25
107-13-1	Acrylonitrile	100	107	107	109	109	2	70-130/25
71-43-2	Benzene	50	52.7	105	52.4	105	1	70-130/25
108-86-1	Bromobenzene	50	52.8	106	53.2	106	1	70-130/25
74-97-5	Bromochloromethane	50	52.5	105	53.0	106	1	70-130/25
75-27-4	Bromodichloromethane	50	60.8	122	59.8	120	2	70-130/25
75-25-2	Bromoform	50	43.4	87	44.0	88	1	70-130/25
74-83-9	Bromomethane	50	55.2	110	53.9	108	2	70-130/25
78-93-3	2-Butanone (MEK)	50	48.4	97	49.9	100	3	70-130/25
104-51-8	n-Butylbenzene	50	57.7	115	57.5	115	0	70-130/25
135-98-8	sec-Butylbenzene	50	58.2	116	58.3	117	0	70-130/25
98-06-6	tert-Butylbenzene	50	60.0	120	59.7	119	1	70-130/25
75-15-0	Carbon disulfide	50	44.7	89	43.9	88	2	70-130/25
56-23-5	Carbon tetrachloride	50	63.8	128	62.4	125	2	70-130/25
108-90-7	Chlorobenzene	50	45.0	90	45.7	91	2	70-130/25
75-00-3	Chloroethane	50	65.5	131* b	63.7	127	3	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	72.4	145* b	96.0	192* b	28* b	70-130/25
67-66-3	Chloroform	50	54.6	109	53.6	107	2	70-130/25
74-87-3	Chloromethane	50	54.5	109	50.4	101	8	70-130/25
95-49-8	o-Chlorotoluene	50	53.2	106	52.9	106	1	70-130/25
106-43-4	p-Chlorotoluene	50	54.5	109	54.8	110	1	70-130/25
124-48-1	Dibromochloromethane	50	56.7	113	57.5	115	1	70-130/25
95-50-1	1,2-Dichlorobenzene	50	48.4	97	49.2	98	2	70-130/25
541-73-1	1,3-Dichlorobenzene	50	49.4	99	49.8	100	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	49.0	98	49.3	99	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	51.5	103	49.2	98	5	70-130/25
75-34-3	1,1-Dichloroethane	50	55.0	110	54.8	110	0	70-130/25
107-06-2	1,2-Dichloroethane	50	58.7	117	57.3	115	2	70-130/25
75-35-4	1,1-Dichloroethene	50	52.9	106	53.1	106	0	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	52.8	106	52.8	106	0	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	53.1	106	52.4	105	1	70-130/25
78-87-5	1,2-Dichloropropane	50	51.9	104	52.1	104	0	70-130/25
142-28-9	1,3-Dichloropropane	50	49.3	99	49.9	100	1	70-130/25
594-20-7	2,2-Dichloropropane	50	67.2	134* b	65.9	132* b	2	70-130/25
563-58-6	1,1-Dichloropropene	50	55.9	112	54.6	109	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-BS	V27394.D	1	01/28/14	AMY	n/a	n/a	MSV1034
MSV1034-BSD	V27395.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

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	49.9	100	49.7	99	0	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	52.9	106	52.7	105	0	70-130/25
123-91-1	1,4-Dioxane	250	223	89	236	94	6	70-130/25
97-63-2	Ethyl methacrylate	50	48.4	97	48.3	97	0	77-137/25
100-41-4	Ethylbenzene	50	52.5	105	52.6	105	0	70-130/25
87-68-3	Hexachlorobutadiene	50	59.4	119	59.3	119	0	70-130/25
591-78-6	2-Hexanone	50	46.8	94	49.8	100	6	70-130/25
98-82-8	Isopropylbenzene	50	59.9	120	59.2	118	1	70-130/25
99-87-6	p-Isopropyltoluene	50	56.7	113	56.9	114	0	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	56.7	113	57.8	116	2	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	56.8	114	57.9	116	2	70-130/25
74-95-3	Methylene bromide	50	54.8	110	54.5	109	1	70-130/25
75-09-2	Methylene chloride	50	48.6	97	48.5	97	0	70-130/25
91-20-3	Naphthalene	50	52.9	106	55.4	111	5	70-130/25
103-65-1	n-Propylbenzene	50	57.3	115	57.1	114	0	70-130/25
100-42-5	Styrene	50	47.5	95	47.8	96	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	53.0	106	53.4	107	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	51.2	102	52.1	104	2	70-130/25
127-18-4	Tetrachloroethene	50	52.5	105	52.0	104	1	70-130/25
108-88-3	Toluene	50	56.7	113	56.0	112	1	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	59.4	119	61.6	123	4	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	59.5	119	61.4	123	3	70-130/25
71-55-6	1,1,1-Trichloroethane	50	61.9	124	60.3	121	3	70-130/25
79-00-5	1,1,2-Trichloroethane	50	52.9	106	53.1	106	0	70-130/25
79-01-6	Trichloroethene	50	56.0	112	55.5	111	1	70-130/25
75-69-4	Trichlorofluoromethane	50	69.0	138* b	66.6	133* b	4	70-130/25
96-18-4	1,2,3-Trichloropropane	50	55.7	111	56.6	113	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	57.8	116	57.6	115	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	58.9	118	59.0	118	0	70-130/25
108-05-4	Vinyl Acetate	50	56.7	113	56.6	113	0	70-130/25
75-01-4	Vinyl chloride	50	50.8	102	50.1	100	1	70-130/25
	m,p-Xylene	100	87.2	87	86.9	87	0	70-130/25
95-47-6	o-Xylene	50	43.5	87	43.7	87	0	70-130/25
1330-20-7	Xylene (total)	150	131	87	131	87	0	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1034-BS	V27394.D	1	01/28/14	AMY	n/a	n/a	MSV1034
MSV1034-BSD	V27395.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	100%	70-130%
2037-26-5	Toluene-D8	102%	101%	70-130%
460-00-4	4-Bromofluorobenzene	102%	102%	70-130%

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

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	38.8	78	43.1	86	11	70-130/25
107-02-8	Acrolein	50	79.3	159* a	87.7	175* a	10	70-130/25
107-13-1	Acrylonitrile	100	98.8	99	109	109	10	70-130/25
71-43-2	Benzene	50	53.0	106	53.2	106	0	70-130/25
108-86-1	Bromobenzene	50	52.9	106	53.1	106	0	70-130/25
74-97-5	Bromochloromethane	50	52.7	105	54.1	108	3	70-130/25
75-27-4	Bromodichloromethane	50	56.5	113	56.5	113	0	70-130/25
75-25-2	Bromoform	50	42.0	84	43.9	88	4	70-130/25
74-83-9	Bromomethane	50	49.2	98	49.4	99	0	70-130/25
78-93-3	2-Butanone (MEK)	50	40.4	81	42.1	84	4	70-130/25
104-51-8	n-Butylbenzene	50	56.8	114	56.8	114	0	70-130/25
135-98-8	sec-Butylbenzene	50	57.7	115	57.4	115	1	70-130/25
98-06-6	tert-Butylbenzene	50	58.1	116	56.9	114	2	70-130/25
75-15-0	Carbon disulfide	50	44.9	90	46.2	92	3	70-130/25
56-23-5	Carbon tetrachloride	50	56.8	114	56.9	114	0	70-130/25
108-90-7	Chlorobenzene	50	45.9	92	46.4	93	1	70-130/25
75-00-3	Chloroethane	50	59.0	118	59.5	119	1	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	239	478* a	411	822* a	53* a	70-130/25
67-66-3	Chloroform	50	51.9	104	52.3	105	1	70-130/25
74-87-3	Chloromethane	50	46.8	94	47.9	96	2	70-130/25
95-49-8	o-Chlorotoluene	50	52.7	105	52.6	105	0	70-130/25
106-43-4	p-Chlorotoluene	50	53.3	107	53.4	107	0	70-130/25
124-48-1	Dibromochloromethane	50	54.8	110	56.3	113	3	70-130/25
95-50-1	1,2-Dichlorobenzene	50	48.2	96	49.2	98	2	70-130/25
541-73-1	1,3-Dichlorobenzene	50	49.4	99	49.8	100	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	48.6	97	49.1	98	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	39.8	80	41.2	82	3	70-130/25
75-34-3	1,1-Dichloroethane	50	53.5	107	54.8	110	2	70-130/25
107-06-2	1,2-Dichloroethane	50	51.9	104	52.7	105	2	70-130/25
75-35-4	1,1-Dichloroethene	50	51.9	104	53.9	108	4	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	53.6	107	54.9	110	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	52.4	105	53.5	107	2	70-130/25
78-87-5	1,2-Dichloropropane	50	51.6	103	51.8	104	0	70-130/25
142-28-9	1,3-Dichloropropane	50	48.9	98	50.3	101	3	70-130/25
594-20-7	2,2-Dichloropropane	50	63.7	127	64.7	129	2	70-130/25
563-58-6	1,1-Dichloropropene	50	53.0	106	53.1	106	0	70-130/25

* = Outside of Control Limits.

6.2.2

6

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

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	49.0	98	49.8	100	2	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	50.2	100	51.2	102	2	70-130/25
123-91-1	1,4-Dioxane	250	214	86	246	98	14	70-130/25
97-63-2	Ethyl methacrylate	50	46.0	92	49.4	99	7	77-137/25
100-41-4	Ethylbenzene	50	53.4	107	53.1	106	1	70-130/25
87-68-3	Hexachlorobutadiene	50	56.5	113	57.2	114	1	70-130/25
591-78-6	2-Hexanone	50	38.0	76	41.7	83	9	70-130/25
98-82-8	Isopropylbenzene	50	59.3	119	58.6	117	1	70-130/25
99-87-6	p-Isopropyltoluene	50	55.7	111	55.8	112	0	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	56.6	113	61.5	123	8	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.7	101	57.0	114	12	70-130/25
74-95-3	Methylene bromide	50	50.8	102	52.4	105	3	70-130/25
75-09-2	Methylene chloride	50	49.5	99	50.5	101	2	70-130/25
91-20-3	Naphthalene	50	50.5	101	59.7	119	17	70-130/25
103-65-1	n-Propylbenzene	50	56.2	112	56.3	113	0	70-130/25
100-42-5	Styrene	50	48.7	97	49.1	98	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	53.0	106	52.9	106	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.9	98	52.8	106	8	70-130/25
127-18-4	Tetrachloroethene	50	52.7	105	52.5	105	0	70-130/25
108-88-3	Toluene	50	55.8	112	55.8	112	0	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	56.8	114	64.2	128	12	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	58.7	117	63.8	128	8	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.2	116	58.6	117	1	70-130/25
79-00-5	1,1,2-Trichloroethane	50	50.4	101	52.6	105	4	70-130/25
79-01-6	Trichloroethene	50	54.5	109	54.0	108	1	70-130/25
75-69-4	Trichlorofluoromethane	50	55.9	112	57.2	114	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	52.0	104	56.1	112	8	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	57.3	115	57.1	114	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	58.5	117	58.1	116	1	70-130/25
108-05-4	Vinyl Acetate	50	53.3	107	55.6	111	4	70-130/25
75-01-4	Vinyl chloride	50	45.2	90	46.2	92	2	70-130/25
	m,p-Xylene	100	89.4	89	89.0	89	0	70-130/25
95-47-6	o-Xylene	50	45.0	90	44.8	90	0	70-130/25
1330-20-7	Xylene (total)	150	134	89	134	89	0	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1035-BS	V27425.D	1	01/29/14	AMY	n/a	n/a	MSV1035
MSV1035-BSD	V27426.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	98%	70-130%
2037-26-5	Toluene-D8	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27897-1MS	V27407.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1MSD	V27408.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1	V27400.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Compound	MC27897-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	169	68* a	159	64* a	6	70-130/30
107-02-8	Acrolein	ND		250	356	142* a	359	144* a	1	70-130/30
107-13-1	Acrylonitrile	ND		500	555	111	550	110	1	70-130/30
71-43-2	Benzene	ND		250	278	111	268	107	4	70-130/30
108-86-1	Bromobenzene	ND		250	278	111	275	110	1	70-130/30
74-97-5	Bromochloromethane	ND		250	276	110	273	109	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	299	120	286	114	4	70-130/30
75-25-2	Bromoform	ND		250	226	90	227	91	0	70-130/30
74-83-9	Bromomethane	ND		250	244	98	240	96	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	200	80	205	82	2	70-130/30
104-51-8	n-Butylbenzene	ND		250	295	118	290	116	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	302	121	298	119	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	302	121	295	118	2	70-130/30
75-15-0	Carbon disulfide	ND		250	236	94	227	91	4	70-130/30
56-23-5	Carbon tetrachloride	ND		250	305	122	292	117	4	70-130/30
108-90-7	Chlorobenzene	ND		250	240	96	236	94	2	70-130/30
75-00-3	Chloroethane	ND		250	297	119	288	115	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* a	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		250	274	110	266	106	3	70-130/30
74-87-3	Chloromethane	ND		250	235	94	247	99	5	70-130/30
95-49-8	o-Chlorotoluene	ND		250	275	110	271	108	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	280	112	276	110	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	296	118	290	116	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	254	102	251	100	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	256	102	253	101	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	255	102	253	101	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	232	93	223	89	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	283	113	276	110	3	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	284	114	269	108	5	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	281	112	273	109	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	2.1		250	285	113	281	112	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	276	110	271	108	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	270	108	264	106	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	263	105	261	104	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	327	131* a	321	128	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	285	114	272	109	5	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27897-1MS	V27407.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1MSD	V27408.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1	V27400.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Compound	MC27897-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	253	101	245	98	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	272	109	264	106	3	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1310	105	1330	106	2	70-130/30
97-63-2	Ethyl methacrylate	ND		250	260	104	252	101	3	72-139/30
100-41-4	Ethylbenzene	ND		250	276	110	272	109	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	292	117	298	119	2	70-130/30
591-78-6	2-Hexanone	ND		250	207	83	207	83	0	70-130/30
98-82-8	Isopropylbenzene	ND		250	310	124	305	122	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	293	117	287	115	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	309	124	306	122	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	302	121	294	118	3	70-130/30
74-95-3	Methylene bromide	ND		250	276	110	270	108	2	70-130/30
75-09-2	Methylene chloride	ND		250	258	103	254	102	2	70-130/30
91-20-3	Naphthalene	ND		250	261	104	295	118	12	70-130/30
103-65-1	n-Propylbenzene	ND		250	293	117	290	116	1	70-130/30
100-42-5	Styrene	ND		250	250	100	247	99	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	274	110	271	108	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	277	111	275	110	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	274	110	268	107	2	70-130/30
108-88-3	Toluene	ND		250	293	117	282	113	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	288	115	314	126	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	303	121	314	126	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	306	122	296	118	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	277	111	271	108	2	70-130/30
79-01-6	Trichloroethene	5.9		250	297	116	287	112	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	290	116	279	112	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	292	117	289	116	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	299	120	291	116	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	304	122	300	120	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	289	116	284	114	2	70-130/30
75-01-4	Vinyl chloride	ND		250	229	92	220	88	4	70-130/30
	m,p-Xylene	ND		500	456	91	449	90	2	70-130/30
95-47-6	o-Xylene	ND		250	231	92	225	90	3	70-130/30
1330-20-7	Xylene (total)	ND		750	687	92	674	90	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27897-1MS	V27407.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1MSD	V27408.D	5	01/28/14	AMY	n/a	n/a	MSV1034
MC27897-1	V27400.D	1	01/28/14	AMY	n/a	n/a	MSV1034

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

MC27893-1, MC27893-3, MC27893-4

CAS No.	Surrogate Recoveries	MS	MSD	MC27897-1	Limits
1868-53-7	Dibromofluoromethane	97%	99%	112%	70-130%
2037-26-5	Toluene-D8	99%	99%	100%	70-130%
460-00-4	4-Bromofluorobenzene	101%	102%	106%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	MC27893-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	143	57* a	151	60* a	5	70-130/30
107-02-8	Acrolein	ND		250	339	136* a	339	136* a	0	70-130/30
107-13-1	Acrylonitrile	ND		500	515	103	503	101	2	70-130/30
71-43-2	Benzene	ND		250	280	112	277	111	1	70-130/30
108-86-1	Bromobenzene	ND		250	278	111	277	111	0	70-130/30
74-97-5	Bromochloromethane	ND		250	275	110	276	110	0	70-130/30
75-27-4	Bromodichloromethane	ND		250	292	117	289	116	1	70-130/30
75-25-2	Bromoform	ND		250	222	89	215	86	3	70-130/30
74-83-9	Bromomethane	ND		250	239	96	234	94	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	189	76	189	76	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	297	119	296	118	0	70-130/30
135-98-8	sec-Butylbenzene	ND		250	305	122	305	122	0	70-130/30
98-06-6	tert-Butylbenzene	ND		250	300	120	300	120	0	70-130/30
75-15-0	Carbon disulfide	ND		250	223	89	227	91	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	300	120	290	116	3	70-130/30
108-90-7	Chlorobenzene	ND		250	242	97	239	96	1	70-130/30
75-00-3	Chloroethane	ND		250	289	116	278	111	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	202	81	13.9	6* a	174* b	70-130/30
67-66-3	Chloroform	ND		250	272	109	265	106	3	70-130/30
74-87-3	Chloromethane	ND		250	239	96	240	96	0	70-130/30
95-49-8	o-Chlorotoluene	ND		250	275	110	274	110	0	70-130/30
106-43-4	p-Chlorotoluene	ND		250	281	112	279	112	1	70-130/30
124-48-1	Dibromochloromethane	ND		250	290	116	285	114	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	254	102	253	101	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	259	104	258	103	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	256	102	255	102	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	225	90	216	86	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	282	113	276	110	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	272	109	263	105	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	277	111	274	110	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	284	114	283	113	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	278	111	275	110	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	272	109	272	109	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	261	104	257	103	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	339	136* a	321	128	5	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	284	114	276	110	3	70-130/30

* = Outside of Control Limits.

6.3.2

6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	MC27893-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	254	102	253	101	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	265	106	263	105	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	945	76	1090	87	14	70-130/30
97-63-2	Ethyl methacrylate	ND		250	254	102	246	98	3	72-139/30
100-41-4	Ethylbenzene	ND		250	281	112	275	110	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	287	115	295	118	3	70-130/30
591-78-6	2-Hexanone	ND		250	201	80	189	76	6	70-130/30
98-82-8	Isopropylbenzene	ND		250	309	124	309	124	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	295	118	293	117	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	4.7		250	297	117	286	113	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	286	114	270	108	6	70-130/30
74-95-3	Methylene bromide	ND		250	270	108	262	105	3	70-130/30
75-09-2	Methylene chloride	ND		250	259	104	254	102	2	70-130/30
91-20-3	Naphthalene	ND		250	262	105	261	104	0	70-130/30
103-65-1	n-Propylbenzene	ND		250	295	118	295	118	0	70-130/30
100-42-5	Styrene	ND		250	258	103	253	101	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	277	111	269	108	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	268	107	259	104	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	277	111	275	110	1	70-130/30
108-88-3	Toluene	ND		250	292	117	292	117	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	285	114	292	117	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	312	125	312	125	0	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	301	120	294	118	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	268	107	266	106	1	70-130/30
79-01-6	Trichloroethene	ND		250	285	114	281	112	1	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	283	113	267	107	6	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	281	112	273	109	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	296	118	297	119	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	303	121	300	120	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	285	114	275	110	4	70-130/30
75-01-4	Vinyl chloride	ND		250	223	89	219	88	2	70-130/30
	m,p-Xylene	ND		500	465	93	463	93	0	70-130/30
95-47-6	o-Xylene	ND		250	234	94	232	93	1	70-130/30
1330-20-7	Xylene (total)	ND		750	699	93	695	93	1	70-130/30

* = Outside of Control Limits.

6.3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27893-2MS	V27436.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2MSD	V27437.D	5	01/29/14	AMY	n/a	n/a	MSV1035
MC27893-2	V27432.D	1	01/29/14	AMY	n/a	n/a	MSV1035

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

MC27893-1, MC27893-2, MC27893-3

CAS No.	Surrogate Recoveries	MS	MSD	MC27893-2	Limits
1868-53-7	Dibromofluoromethane	97%	95%	107%	70-130%
2037-26-5	Toluene-D8	99%	98%	98%	70-130%
460-00-4	4-Bromofluorobenzene	100%	100%	106%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix iuterference and/or sample non-homogeneity.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1034-CC1019	Injection Date:	01/28/14
Lab File ID:	V27394.D	Injection Time:	11:42
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	428135	6.55	538099	7.73	314169	11.07	333134	13.28	142241	3.51
Upper Limit [a]	856270	7.05	1076198	8.23	628338	11.57	666268	13.78	284482	4.01
Lower Limit [b]	214068	6.05	269050	7.23	157085	10.57	166567	12.78	71121	3.01
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1034-BS	428135	6.55	538099	7.73	314169	11.07	333134	13.28	142241	3.51
MSV1034-BSD	447841	6.54	564351	7.73	323136	11.07	343804	13.28	157721	3.50
MSV1034-MB	339139	6.55	464620	7.73	270440	11.07	259458	13.28	139377	3.51
MC27893-4	329804	6.55	453003	7.73	267965	11.07	253213	13.28	129567	3.50
MC27897-1	323400	6.55	437961	7.73	255838	11.07	242654	13.28	132358	3.51
MC27893-1	420000	6.55	652384	7.73	347301	11.07	345275	13.28	193090	3.51
MC27893-3	583956	6.55	818213	7.73	426068	11.07	466910	13.28	524580[c]	3.55
ZZZZZZ	523631	6.55	705664	7.73	392134	11.07	391726	13.28	213300	3.51
ZZZZZZ	473893	6.55	630840	7.73	350362	11.07	341749	13.28	193589	3.51
ZZZZZZ	450143	6.55	616597	7.73	338033	11.07	330070	13.28	184466	3.51
MC27897-1MS	504413	6.54	637109	7.73	361898	11.07	383877	13.28	190478	3.51
MC27897-1MSD	521883	6.54	674356	7.73	372807	11.07	397062	13.28	196183	3.50
ZZZZZZ	476087	6.54	639039	7.72	352421	11.06	347531	13.28	185151	3.50
ZZZZZZ	449846	6.54	607467	7.72	336232	11.06	327379	13.28	174738	3.50
ZZZZZZ	438827	6.55	600950	7.73	333406	11.07	320803	13.28	171065	3.51
ZZZZZZ	410860	6.54	556822	7.73	316976	11.07	304908	13.28	161337	3.51
ZZZZZZ	396903	6.55	539688	7.73	311354	11.07	305060	13.28	153690	3.51
ZZZZZZ	395530	6.54	536172	7.72	306499	11.07	292759	13.28	149249	3.50
ZZZZZZ	398425	6.55	542037	7.73	308912	11.07	299368	13.28	163196	3.51
ZZZZZZ	379822	6.55	519520	7.73	299053	11.07	289147	13.28	153306	3.50
ZZZZZZ	378726	6.54	521537	7.72	319243	11.07	339972	13.28	147496	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.

Volatile Internal Standard Area Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1035-CC1019	Injection Date:	01/29/14
Lab File ID:	V27424.D	Injection Time:	11:03
Instrument ID:	GCMSV	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	1S 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	530361	6.56	676996	7.74	381897	11.08	412049	13.29	173284	3.52
Upper Limit [a]	1060722	7.06	1353992	8.24	763794	11.58	824098	13.79	346568	4.02
Lower Limit [b]	265181	6.06	338498	7.24	190949	10.58	206025	12.79	86642	3.02
Lab Sample ID	IS 1 AREA	RT	1S 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1035-BS	543620	6.56	698899	7.74	385229	11.08	415808	13.29	165753	3.52
MSV1035-BSD	544877	6.56	697958	7.74	387523	11.08	419770	13.29	199457	3.53
MSV1035-MB	439388	6.56	600006	7.74	340247	11.08	328346	13.29	137712	3.52
ZZZZZZ	435813	6.56	595677	7.74	339748	11.08	336170	13.29	155436	3.52
ZZZZZZ	447783	6.57	615156	7.75	352447	11.08	339571	13.29	166997	3.52
MC27893-2	416411	6.56	567728	7.74	323053	11.08	309090	13.29	143137	3.52
ZZZZZZ	450714	6.56	575104	7.74	328234	11.08	306607	13.29	125183	3.52
ZZZZZZ	387502	6.57	531510	7.74	327736	11.08	340545	13.29	115072	3.62
MC27893-2MS	553229	6.57	706986	7.75	390728	11.08	422135	13.29	166769	3.54
MC27893-2MSD	561679	6.56	714234	7.74	397041	11.08	423876	13.29	165213	3.52
ZZZZZZ	512071	6.56	678048	7.74	374522	11.08	373728	13.29	180425	3.52
MC27893-3	541592	6.56	700736	7.74	388660	11.08	394843	13.29	212228	3.51
MC27893-1	521235	6.56	709489	7.74	393174	11.07	394263	13.29	191620	3.52
ZZZZZZ	480517	6.56	650363	7.74	362801	11.07	360914	13.29	161482	3.51
ZZZZZZ	470840	6.56	634308	7.74	356556	11.07	357392	13.29	148282	3.51
ZZZZZZ	462841	6.56	622948	7.73	369659	11.07	364360	13.29	167695	3.52
ZZZZZZ	469582	6.56	638033	7.74	359318	11.07	352593	13.29	172235	3.52
ZZZZZZ	457675	6.56	621354	7.74	349693	11.07	339227	13.28	162192	3.52
ZZZZZZ	458341	6.56	629981	7.74	353869	11.07	342808	13.28	147617	3.52
ZZZZZZ	462135	6.56	593543	7.73	330879	11.07	319685	13.28	141918	3.52
ZZZZZZ	429912	6.55	572799	7.73	331465	11.07	330214	13.28	145970	3.51
ZZZZZZ	418182	6.56	564553	7.73	320747	11.07	313699	13.28	156276	3.52
ZZZZZZ	515980	6.55	647579	7.73	368659	11.07	371185	13.28	224455	3.51
ZZZZZZ	487681	6.55	641392	7.74	360941	11.07	365688	13.28	143154	3.51

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

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

Volatile Surrogate Recovery Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27893-1	V27440.D	101.0	97.0	103.0
MC27893-1	V27401.D	98.0	93.0	106.0
MC27893-2	V27432.D	107.0	98.0	106.0
MC27893-3	V27439.D	97.0	98.0	103.0
MC27893-3	V27403.D	94.0	92.0	105.0
MC27893-4	V27399.D	114.0	100.0	106.0
MC27893-2MS	V27436.D	97.0	99.0	100.0
MC27893-2MSD	V27437.D	95.0	98.0	100.0
MC27897-1MS	V27407.D	97.0	99.0	101.0
MC27897-1MSD	V27408.D	99.0	99.0	102.0
MSV1034-BS	V27394.D	101.0	102.0	102.0
MSV1034-BSD	V27395.D	100.0	101.0	102.0
MSV1034-MB	V27398.D	113.0	100.0	106.0
MSV1035-BS	V27425.D	98.0	99.0	101.0
MSV1035-BSD	V27426.D	98.0	99.0	100.0
MSV1035-MB	V27429.D	105.0	98.0	103.0

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

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-MB	W17443.D	1	01/29/14	KR	01/27/14	OP36666	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-MB	W17443.D	1	01/29/14	KR	01/27/14	OP36666	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		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	72%	30-130%
321-60-8	2-Fluorobiphenyl	76%	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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36668-MB	I87120.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27893-1, MC27893-2, MC27893-3

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	0.052	0.20	0.050	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.029	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	80%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	88%	30-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-BS	W17444.D	1	01/29/14	KR	01/27/14	OP36666	MSW766
OP36666-BSD	W17445.D	1	01/29/14	KR	01/27/14	OP36666	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	23.7	47	24.5	49	3	30-130/20
95-57-8	2-Chlorophenol	50	41.5	83	40.6	81	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	50	40.5	81	40.6	81	0	30-130/20
120-83-2	2,4-Dichlorophenol	50	41.5	83	41.6	83	0	30-130/20
105-67-9	2,4-Dimethylphenol	50	32.1	64	29.3	59	9	30-130/20
51-28-5	2,4-Dinitrophenol	50	37.5	75	38.6	77	3	30-130/20
534-52-1	4,6-Dinitro-o-cresol	50	51.2	102	50.8	102	1	30-130/20
95-48-7	2-Methylphenol	50	35.2	70	34.6	69	2	30-130/20
	3&4-Methylphenol	100	63.8	64	64.6	65	1	30-130/20
88-75-5	2-Nitrophenol	50	44.0	88	43.5	87	1	30-130/20
100-02-7	4-Nitrophenol	50	16.6	33	16.6	33	0	30-130/20
87-86-5	Pentachlorophenol	50	43.8	88	43.3	87	1	30-130/20
108-95-2	Phenol	50	18.6	37	18.9	38	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	50	42.4	85	43.1	86	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	50	43.3	87	42.7	85	1	30-130/20
62-53-3	Aniline	50	28.1	56	27.2	54	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	50	62.9	126	61.1	122	3	40-140/20
85-68-7	Butyl benzyl phthalate	50	51.9	104	49.9	100	4	40-140/20
100-51-6	Benzyl Alcohol	50	38.3	77	37.4	75	2	40-140/20
91-58-7	2-Chloronaphthalene	50	44.0	88	43.2	86	2	40-140/20
106-47-8	4-Chloroaniline	50	42.6	85	39.9	80	7	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	50	38.0	76	36.4	73	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	50	50.1	100	48.2	96	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	50	104	208* [a]	100	200* [a]	4	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	50	51.8	104	51.6	103	0	40-140/20
122-66-7	1,2-Diphenylhydrazine	50	52.5	105	49.5	99	6	40-140/20
121-14-2	2,4-Dinitrotoluene	50	50.9	102	50.2	100	1	40-140/20
606-20-2	2,6-Dinitrotoluene	50	50.3	101	49.6	99	1	40-140/20
91-94-1	3,3'-Dichlorobenzidine	50	43.0	86	41.3	83	4	40-140/20
132-64-9	Dibenzofuran	50	48.3	97	48.3	97	0	40-140/20
84-74-2	Di-n-butyl phthalate	50	48.5	97	45.7	91	6	40-140/20
117-84-0	Di-n-octyl phthalate	50	50.3	101	48.4	97	4	40-140/20
84-66-2	Diethyl phthalate	50	42.0	84	39.8	80	5	40-140/20
131-11-3	Dimethyl phthalate	50	30.0	60	25.7	51	15	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	55.1	110	53.3	107	3	40-140/20
118-74-1	Hexachlorobenzene	50	66.1	132	62.1	124	6	40-140/20

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-BS	W17444.D	1	01/29/14	KR	01/27/14	OP36666	MSW766
OP36666-BSD	W17445.D	1	01/29/14	KR	01/27/14	OP36666	MSW766

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	50	48.4	97	47.5	95	2	40-140/20
67-72-1	Hexachloroethane	50	27.4	55	28.0	56	2	40-140/20
78-59-1	Isophorone	50	47.6	95	46.1	92	3	40-140/20
88-74-4	2-Nitroaniline	50	51.6	103	50.4	101	2	40-140/20
99-09-2	3-Nitroaniline	50	45.7	91	44.4	89	3	40-140/20
100-01-6	4-Nitroaniline	50	47.6	95	46.2	92	3	40-140/20
98-95-3	Nitrobenzene	50	45.5	91	42.9	86	6	40-140/20
62-75-9	n-Nitrosodimethylamine	50	36.3	73	35.4	71	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	50	45.0	90	44.4	89	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	50	50.3	101	48.1	96	4	40-140/20
110-86-1	Pyridine	50	31.1	62	29.6	59	5	40-140/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	50%	50%	15-110%
4165-62-2	Phenol-d5	33%	33%	15-110%
118-79-6	2,4,6-Tribromophenol	114%* b	109%	15-110%
4165-60-0	Nitrobenzene-d5	75%	73%	30-130%
321-60-8	2-Fluorobiphenyl	78%	78%	30-130%
1718-51-0	Terphenyl-d14	103%	101%	30-130%

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Associated target analytes are non-detect.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36668-BS	I87121.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
OP36668-BSD	I87122.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	47.4	95	45.8	92	3	40-140/30
208-96-8	Acenaphthylene	50	40.4	81	39.1	78	3	40-140/30
120-12-7	Anthracene	50	46.6	93	44.9	90	4	40-140/30
56-55-3	Benzo(a)anthracene	50	56.7	113	53.7	107	5	40-140/30
50-32-8	Benzo(a)pyrene	50	53.1	106	51.2	102	4	40-140/30
205-99-2	Benzo(b)fluoranthene	50	59.3	119	52.6	105	12	40-140/30
191-24-2	Benzo(g,h,i)perylene	50	60.1	120	58.6	117	3	40-140/30
207-08-9	Benzo(k)fluoranthene	50	53.0	106	55.7	111	5	40-140/30
218-01-9	Chrysene	50	54.0	108	51.1	102	6	40-140/30
53-70-3	Dibenzo(a,h)anthracene	50	61.2	122	59.2	118	3	40-140/30
206-44-0	Fluoranthene	50	54.0	108	50.9	102	6	40-140/30
86-73-7	Fluorene	50	47.5	95	46.1	92	3	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	60.9	122	58.7	117	4	40-140/30
90-12-0	1-Methylnaphthalene	50	40.1	80	40.0	80	0	40-140/30
91-57-6	2-Methylnaphthalene	50	39.5	79	39.0	78	1	40-140/30
85-01-8	Phenanthrene	50	47.4	95	46.0	92	3	40-140/30
129-00-0	Pyrene	50	52.8	106	50.4	101	5	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	83%	82%	30-130%
321-60-8	2-Fluorobiphenyl	73%	71%	30-130%
1718-51-0	Terphenyl-d14	91%	87%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-MS	W17464.D	1	01/29/14	KR	01/27/14	OP36666	MSW767
OP36666-MSD	W17465.D	1	01/29/14	KR	01/27/14	OP36666	MSW767
MC27800-1	W17466.D	1	01/29/14	KR	01/27/14	OP36666	MSW767

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	MC27800-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	21.6	43	22.0	44	2	30-130/20
95-57-8	2-Chlorophenol	ND		50	41.4	83	40.4	81	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	40.4	81	38.8	78	4	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.7	83	40.1	80	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	25.8	52	20.2	40	24* a	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	14.3	29* b	15.0	30	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	24.0	48	24.1	48	0	30-130/20
95-48-7	2-Methylphenol	ND		50	35.3	71	34.2	68	3	30-130/20
	3&4-Methylphenol	ND		100	65.8	66	61.9	62	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.5	85	40.6	81	5	30-130/20
100-02-7	4-Nitrophenol	ND		50	16.3	33	15.7	31	4	30-130/20
87-86-5	Pentachlorophenol	ND		50	42.1	84	40.4	81	4	30-130/20
108-95-2	Phenol	ND		50	19.3	39	18.7	37	3	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	42.0	84	40.4	81	4	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	41.7	83	41.0	82	2	30-130/20
62-53-3	Aniline	ND		50	26.6	53	25.7	51	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	61.9	124	61.8	124	0	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	52.6	105	50.3	101	4	40-140/20
100-51-6	Benzyl Alcohol	ND		50	34.4	69	33.6	67	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	42.9	86	41.8	84	3	40-140/20
106-47-8	4-Chloroaniline	ND		50	40.5	81	38.9	78	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	36.6	73	35.3	71	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	49.4	99	48.7	97	1	40-140/20
108-60-1	bis(2-Chloroisopropyl)etber	ND		50	103	206* c	101	202* c	2	40-140/20
7005-72-3	4-Chlorophenyl pbenyl ether	ND		50	50.9	102	49.7	99	2	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	50.0	100	49.3	99	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	49.3	99	49.2	98	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	48.6	97	46.4	93	5	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	44.9	90	45.4	91	1	40-140/20
132-64-9	Dibenzofuran	ND		50	46.8	94	46.3	93	1	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	48.3	97	46.5	93	4	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	50.9	102	49.3	99	3	40-140/20
84-66-2	Diethyl phthalate	ND		50	42.2	84	37.8	76	11	40-140/20
131-11-3	Dimethyl phthalate	ND		50	30.6	61	21.8	44	34* a	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	56.0	112	53.7	107	4	40-140/20
118-74-1	Hexachlorobenzene	ND		50	60.7	121	62.1	124	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36666-MS	W17464.D	1	01/29/14	KR	01/27/14	OP36666	MSW767
OP36666-MSD	W17465.D	1	01/29/14	KR	01/27/14	OP36666	MSW767
MC27800-1	W17466.D	1	01/29/14	KR	01/27/14	OP36666	MSW767

The QC reported here applies to the following samples: Method: SW846 8270D

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	MC27800-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	34.6	69	32.5	65	6	40-140/20
67-72-1	Hexachloroethane	ND		50	27.8	56	26.5	53	5	40-140/20
78-59-1	Isophorone	ND		50	46.5	93	45.5	91	2	40-140/20
88-74-4	2-Nitroaniline	ND		50	50.1	100	49.9	100	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	45.1	90	44.5	89	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	47.0	94	45.9	92	2	40-140/20
98-95-3	Nitrobenzene	ND		50	43.9	88	43.0	86	2	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	33.8	68	34.3	69	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	45.3	91	44.0	88	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	48.6	97	47.3	95	3	40-140/20
110-86-1	Pyridine	ND		50	28.4	57	29.3	59	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-1	Limits
367-12-4	2-Fluorophenol	50%	50%	51%	15-110%
4165-62-2	Pbenol-d5	35%	34%	33%	15-110%
118-79-6	2,4,6-Tribromophenol	110%	106%	103%	15-110%
4165-60-0	Nitrobenzene-d5	73%	72%	73%	30-130%
321-60-8	2-Fluorobiphenyl	78%	76%	77%	30-130%
1718-51-0	Terphenyl-d14	103%	100%	107%	30-130%

(a) High RPD due to possible matrix interference and/or sample non-homogeneity.
(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(c) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36668-MS	I87123.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
OP36668-MSD	I87124.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240
MC27800-2	I87125.D	1	01/30/14	KR	01/27/14	OP36668	MSI3240

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27893-1, MC27893-2, MC27893-3

CAS No.	Compound	MC27800-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	45.7	91	45.3	91	1	40-140/20
208-96-8	Acenaphthylene	ND		50	39.4	79	38.7	77	2	40-140/20
120-12-7	Anthracene	ND		50	45.3	91	44.5	89	2	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	55.1	110	53.3	107	3	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	51.7	103	50.4	101	3	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	57.8	116	51.9	104	11	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	59.2	118	57.8	116	2	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	52.0	104	55.1	110	6	40-140/20
218-01-9	Chrysene	ND		50	53.1	106	50.4	101	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	59.9	120	58.9	118	2	40-140/20
206-44-0	Fluoranthene	ND		50	52.6	105	50.8	102	3	40-140/20
86-73-7	Fluorene	ND		50	45.7	91	45.5	91	0	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	59.7	119	58.2	116	3	40-140/20
90-12-0	1-Methylnaphthalene	0.050	J	50	40.9	82	39.2	78	4	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	39.7	79	37.8	76	5	40-140/20
85-01-8	Phenanthrene	ND		50	46.6	93	45.9	92	2	40-140/20
129-00-0	Pyrene	ND		50	51.8	104	49.9	100	4	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-2	Limits
4165-60-0	Nitrobenzene-d5	81%	81%	83%	30-130%
321-60-8	2-Fluorobiphenyl	71%	71%	69%	30-130%
1718-51-0	Terphenyl-d14	90%	87%	93%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3240-CC3238	Injection Date:	01/30/14
Lab File ID:	I87117.D	Injection Time:	14:02
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	388283	4.44	856468	5.50	465872	7.05	759195	8.48	455758	11.25	1184622	12.76
Upper Limit [a]	776566	4.94	1712936	6.00	931744	7.55	1518390	8.98	911516	11.75	2369244	13.26
Lower Limit [b]	194142	3.94	428234	5.00	232936	6.55	379598	7.98	227879	10.75	592311	12.26
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
OP36628-MB	360716	4.44	795698	5.50	425977	7.05	686167	8.48	403734	11.25	1044765	12.76
OP36628-BS	343336	4.44	765787	5.50	409563	7.05	663027	8.48	395144	11.25	1015610	12.76
OP36668-MB	351690	4.44	769672	5.50	413656	7.05	668838	8.48	391530	11.25	1028420	12.76
OP36668-BS	362288	4.44	808465	5.50	432769	7.05	692487	8.49	410740	11.25	1053565	12.76
OP36668-BSD	369943	4.44	809354	5.50	440057	7.05	707318	8.48	427274	11.25	1076615	12.76
OP36668-MS	359314	4.44	794285	5.50	435121	7.05	702157	8.48	414197	11.25	1061206	12.77
OP36668-MSD	362841	4.44	800248	5.50	428441	7.05	682348	8.48	414942	11.25	1049895	12.76
MC27800-2	357093	4.44	777752	5.50	423152	7.05	678764	8.48	405611	11.25	1041273	12.76
MC27893-1	365452	4.44	790351	5.50	427508	7.05	698511	8.48	421213	11.25	1082509	12.76
MC27893-2	378733	4.44	827365	5.50	444616	7.05	718434	8.48	425451	11.25	1069378	12.76
MC27893-3	414688	4.44	883396	5.50	484562	7.05	778997	8.48	464012	11.25	1169444	12.76
ZZZZZZ	354951	4.44	748031	5.50	412805	7.05	663874	8.48	405898	11.25	1043135	12.76
ZZZZZZ	377722	4.44	802212	5.50	442809	7.05	714182	8.48	441799	11.25	1111149	12.76
OP36628-MS	358090	4.44	792125	5.50	428180	7.05	682985	8.48	413722	11.25	1069979	12.76
OP36628-MSD	364910	4.44	815531	5.50	441766	7.05	702680	8.48	419112	11.25	1084330	12.76
MC27807-4	363527	4.44	789935	5.50	434375	7.05	695083	8.48	409651	11.25	1072099	12.76
ZZZZZZ	358430	4.44	794216	5.50	433852	7.05	700825	8.48	416699	11.25	1066937	12.76
ZZZZZZ	380367	4.44	834062	5.50	448195	7.05	720786	8.48	428290	11.25	1107315	12.76
ZZZZZZ	366122	4.44	809665	5.50	433880	7.05	699542	8.48	415334	11.25	1071945	12.76
ZZZZZZ	359726	4.44	787976	5.50	421113	7.05	675131	8.48	404283	11.25	1053475	12.76
ZZZZZZ	364478	4.44	798951	5.50	412929	7.05	688753	8.48	415567	11.25	1093622	12.76
ZZZZZZ	347855	4.44	761316	5.50	396908	7.05	658441	8.48	398009	11.25	1056145	12.76
ZZZZZZ	371723	4.44	814050	5.50	439030	7.05	701916	8.48	419478	11.25	1077383	12.76
ZZZZZZ	345725	4.44	761705	5.50	408125	7.05	654909	8.48	397671	11.25	1021809	12.76
ZZZZZZ	364938	4.44	797124	5.50	432516	7.05	700403	8.48	425506	11.25	1060102	12.76

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenantbrene-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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxaua, IL

Check Std:	MSW766-CC729	Injection Date:	01/29/14
Lab File ID:	W17427.D	Injection Time:	07:28
Instrument ID:	GCMSW	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	58298	4.47	220682	5.54	150861	7.08	259343	8.38	266543	11.08	243310	12.86
Upper Limit [a]	116596	4.97	441364	6.04	301722	7.58	518686	8.88	533086	11.58	486620	13.36
Lower Limit [b]	29149	3.97	110341	5.04	75431	6.58	129672	7.88	133272	10.58	121655	12.36

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
OP36652-MB	60792	4.47	225349	5.53	151942	7.08	253325	8.37	253917	11.08	236094	12.85
OP36652-BS	60215	4.47	220576	5.54	147686	7.08	256663	8.37	250177	11.08	228918	12.85
OP36652-MS	58080	4.47	212484	5.54	140662	7.08	244104	8.37	239065	11.08	218464	12.85
OP36652-MSD	62695	4.47	232127	5.54	155212	7.08	262624	8.37	261207	11.08	241944	12.85
MC27500-23	63224	4.47	238070	5.54	158607	7.08	273509	8.37	268697	11.08	253727	12.85
OP36688-MB	67588	4.47	250359	5.53	167692	7.08	279360	8.37	266344	11.08	240893	12.85
OP36688-BS	71174	4.47	264933	5.54	174277	7.08	287753	8.38	272508	11.08	247611	12.85
ZZZZZZ	64927	4.47	235983	5.53	151710	7.08	253360	8.37	228584	11.08	201993	12.85
ZZZZZZ	58374	4.47	215792	5.53	143816	7.08	238029	8.37	240010	11.08	225891	12.85
ZZZZZZ	62062	4.47	228203	5.53	148291	7.08	248497	8.37	244505	11.08	232108	12.85
OP36679-MB	62128	4.47	229071	5.53	152600	7.08	259121	8.37	254909	11.08	241274	12.85
OP36679-BS	63196	4.47	233406	5.54	156001	7.08	263963	8.37	255257	11.08	242735	12.85
ZZZZZZ	65602	4.47	242036	5.53	161933	7.08	272438	8.37	267153	11.08	255143	12.85
ZZZZZZ	66056	4.47	244694	5.53	163229	7.08	270676	8.37	265338	11.08	249514	12.85
ZZZZZZ	62028	4.47	234468	5.53	154033	7.08	260005	8.37	267622	11.08	247047	12.85
OP36666-MB	59445	4.47	220292	5.53	144019	7.08	243236	8.37	237610	11.08	223925	12.85
OP36666-BS	61534	4.47	221397	5.54	146713	7.08	246662	8.37	244089	11.08	228575	12.85
OP36666-BSD	63939	4.47	233986	5.54	152659	7.08	263868	8.37	255904	11.08	240028	12.85
ZZZZZZ	62056	4.47	225175	5.53	147479	7.08	246231	8.37	247144	11.07	233285	12.85

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW767-CC729	Injection Date:	01/29/14
Lab File ID:	W17448.D	Injection Time:	16:08
Instrument ID:	GCMSW	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	66062	4.47	245912	5.54	162600	7.08	278995	8.38	284806	11.08	261481	12.85
Upper Limit [a]	132124	4.97	491824	6.04	325200	7.58	557990	8.88	569612	11.58	522962	13.35
Lower Limit [b]	33031	3.97	122956	5.04	81300	6.58	139498	7.88	142403	10.58	130741	12.35
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
OP36679-MS	65959	4.47	245142	5.54	160762	7.08	274120	8.37	274013	11.08	253118	12.85
OP36679-MSD	66009	4.47	243481	5.54	161623	7.08	274090	8.37	267279	11.08	249726	12.85
MC27734-9	68517	4.47	252992	5.53	166445	7.08	282349	8.37	278175	11.07	260215	12.85
OP36664-MB	71621	4.47	270760	5.53	178078	7.08	295918	8.37	276583	11.07	248414	12.85
OP36664-BS	75571	4.47	283049	5.54	188074	7.08	308878	8.37	291734	11.08	257970	12.85
OP36664-BSD	77868	4.47	287057	5.54	186937	7.08	313644	8.37	290131	11.08	258269	12.85
OP36664-MS	72241	4.47	260362	5.54	164973	7.08	271004	8.37	236329	11.08	215513	12.85
OP36664-MSD	69796	4.47	253609	5.54	161429	7.08	265904	8.37	237761	11.08	213340	12.85
MC28000-18	76957	4.47	280849	5.53	178055	7.08	287149	8.37	250614	11.08	234318	12.85
ZZZZZZ	78524	4.47	286302	5.54	183046	7.08	297149	8.37	271671	11.07	247065	12.85
ZZZZZZ	69046	4.47	251240	5.53	162304	7.08	269339	8.37	259194	11.07	252005	12.85
ZZZZZZ	66762	4.47	246351	5.54	158358	7.08	260689	8.37	249207	11.08	242002	12.85
ZZZZZZ	65370	4.47	244725	5.54	160119	7.08	265665	8.37	258042	11.08	243480	12.85
OP36666-MS	61437	4.47	228422	5.54	151611	7.08	257282	8.38	248053	11.08	232680	12.85
OP36678-MS	61437	4.47	228422	5.54	151611	7.08	257282	8.38	248053	11.08	232680	12.85
OP36666-MSD	59839	4.47	224485	5.54	148038	7.08	251944	8.38	247995	11.08	231892	12.85
OP36678-MSD	59839	4.47	224485	5.54	148038	7.08	251944	8.38	247995	11.08	231892	12.85
MC27800-1	59774	4.47	224837	5.54	144851	7.08	250332	8.37	250021	11.08	233118	12.85
MC27800-7	59774	4.47	224837	5.54	144851	7.08	250332	8.37	250021	11.08	233118	12.85
MC27893-1	61309	4.47	220582	5.54	144993	7.08	244300	8.37	250957	11.08	237088	12.85
MC27893-2	61682	4.47	229777	5.54	152282	7.08	254749	8.37	256710	11.08	238733	12.85
MC27893-3	68798	4.47	252155	5.54	165472	7.08	270626	8.37	273490	11.08	260117	12.85
ZZZZZZ	65807	4.47	239332	5.54	158673	7.08	270003	8.37	276953	11.08	259544	12.85
ZZZZZZ	56694	4.47	210477	5.54	140988	7.08	237421	8.37	244379	11.08	223325	12.85
ZZZZZZ	64562	4.47	239902	5.54	157599	7.08	267479	8.37	266393	11.08	255235	12.85

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 Surrogate Recovery Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27893-1	W17467.D	39.0	27.0	108.0	56.0	64.0	84.0
MC27893-2	W17468.D	44.0	31.0	105.0	67.0	71.0	80.0
MC27893-3	W17469.D	29.0	25.0	96.0	65.0	69.0	94.0
OP36666-BS	W17444.D	50.0	33.0	114.0* [a]	75.0	78.0	103.0
OP36666-BSD	W17445.D	50.0	33.0	109.0	73.0	78.0	101.0
OP36666-MB	W17443.D	49.0	33.0	105.0	72.0	76.0	100.0
OP36666-MS	W17464.D	50.0	35.0	110.0	73.0	78.0	103.0
OP36666-MSD	W17465.D	50.0	34.0	106.0	72.0	76.0	100.0

Surrogate Compounds	Recovery Limits
S1 = 2-Flnorophenol	15-110%
S2 = Phenol-d5	15-110%
S3 = 2,4,6-Tribromophenol	15-110%
S4 = Nitrobenzene-d5	30-130%
S5 = 2-Flnorobiphenyl	30-130%
S6 = Terphenyl-d14	30-130%

(a) Ontside control limits. Associated target analytes are non-detect.

Semivolatile Surrogate Recovery Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27893-1	I87126.D	66.0	60.0	76.0
MC27893-2	I87127.D	76.0	65.0	71.0
MC27893-3	I87128.D	75.0	64.0	84.0
OP36668-BS	I87121.D	83.0	73.0	91.0
OP36668-BSD	I87122.D	82.0	71.0	87.0
OP36668-MB	I87120.D	80.0	70.0	88.0
OP36668-MS	I87123.D	81.0	71.0	90.0
OP36668-MSD	I87124.D	81.0	71.0	87.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-MB	BB54I68.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27893-1, MC27893-2, MC27893-3, MC27893-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	76%	36-173%
460-00-4	Bromofluorobenzene (S)	67%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-BS	BB54169.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27893-1, MC27893-2, MC27893-3, MC27893-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.053	75	60-140
106-93-4	1,2-Dibromoethane	0.071	0.050	70	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	82%	36-173%
460-00-4	Bromofluorobenzene (S)	71%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36674-MS	BB54170.D	1	01/28/14	CZ	01/27/14	OP36674	GBB3162
OP36674-MSD	BB54171.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162
MC27800-5	BB54172.D	1	01/29/14	CZ	01/27/14	OP36674	GBB3162

The QC reported here applies to the following samples: Method: SW846 8011

MC27893-1, MC27893-2, MC27893-3, MC27893-5

CAS No.	Compound	MC27800-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.052	73	0.055	77	6	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.046	65	0.049	69	6	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-5	Limits
460-00-4	Bromofluorobenzene (S)	84%	83%	55%	36-173%
460-00-4	Bromofluorobenzene (S)	63%	65%	50%	36-173%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27893-1	BB54180.D	89.0	64.0
MC27893-2	BB54181.D	78.0	66.0
MC27893-3	BB54182.D	81.0	73.0
MC27893-5	BB54183.D	78.0	68.0
OP36674-BS	BB54169.D	82.0	71.0
OP36674-MB	BB54168.D	76.0	67.0
OP36674-MS	BB54170.D	84.0	63.0
OP36674-MSD	BB54171.D	83.0	65.0

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3162-ICC3162	Injection Date:	01/28/14
Lab File ID:	BB54163.D	Injection Time:	20:54
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.92	4.14

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB54166A.D	01/28/14	22:05	4.92	4.14
OP36674-MB	BB54168.D	01/28/14	22:54	4.91	4.14
OP36674-BS	BB54169.D	01/28/14	23:18	4.91	4.14
OP36674-MS	BB54170.D	01/28/14	23:43	4.91	4.14
OP36674-MSD	BB54171.D	01/29/14	00:07	4.91	4.14
MC27800-5	BB54172.D	01/29/14	00:31	4.91	4.14
ZZZZZZ	BB54173.D	01/29/14	00:55	4.90	4.14
ZZZZZZ	BB54174.D	01/29/14	01:20	4.91	4.14
ZZZZZZ	BB54175.D	01/29/14	01:44	4.90	4.14
ZZZZZZ	BB54176.D	01/29/14	02:08	4.90	4.14
ZZZZZZ	BB54177.D	01/29/14	02:32	4.90	4.14

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: MC27893
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3162-CC3162	Injection Date:	01/29/14
Lab File ID:	BB54178.D	Injection Time:	02:56
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.90	4.14

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB54179.D	01/29/14	03:20	4.90	4.14
MC27893-1	BB54180.D	01/29/14	03:45	4.89	4.14
MC27893-2	BB54181.D	01/29/14	04:09	4.91	4.14
MC27893-3	BB54182.D	01/29/14	04:33	4.90	4.14
MC27893-5	BB54183.D	01/29/14	04:57	4.92	4.14
GBB3162-ECC316	BB54184.D	01/29/14	05:21	4.91	4.14

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Reteution time from GC signal #2
(b) Retention time from GC signal #1

8.5.2

8

Roxana Groundwater Quarterly – 1st Quarter 2014 Data Review

Laboratory SDG: MC27954

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P93B-ROX-012814	P93B-ROX-012814-Dup
P114-ROX-012814	TB-ROX-012814-HCL
TB-ROX-012814-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the PAH compound phenanthrene was detected in the method blank. VOC LCS/LCSD recoveries were outside evaluation criteria. Field duplicate pair P93B-ROX-012814/P93B-ROX-012814-Dup was 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 acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 0.3ºC, 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
OP36697-MB	PAHs	Phenanthrene	0.023 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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93B-ROX-012814	PAHs	Phenanthrene	-	**U**
P93B-ROX-012814-Dup	PAHs	Phenanthrene	-	**U**

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
MSV1039-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**532**	NA	70-130
MSV1039-BS/BSD	VOCs	Dichlorodifluoromethane	**134**	NA	70-130
MSV1039-BS/BSD	VOCs	2,2-Dichloropropane	**139**	NA	70-130
MSV1039-BS/BSD	VOCs	Trichlorofluoromethane	**140**	NA	70-130
MSV1042-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**288/426**	**39**	70-130/25
MSV1042-BS/BSD	VOCs	2,2-Dichloropropane	**132**/127	3	70-130/25

Analytical data reported as non-detect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. MSV1039-BS/BSD was associated with the trip blank. Trip blanks are quality control samples and are not qualified. 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?

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
MW6A-ROX-011614	MW6A-ROX-011614-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

New England ACCUTEST LABORATORIES

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27954

Sampling Date: 01/28/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **82**

Reviewed on 2/27/2014 MM

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: MC27954

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC27954-1	01/28/14	10:35	DMMM	01/29/14	AQ	Ground Water	P93B-ROX-012814
MC27954-2	01/28/14	10:35	DMMM	01/29/14	AQ	Ground Water	P93B-ROX-012814-DUP
MC27954-3	01/28/14	16:25	DMMM	01/29/14	AQ	Ground Water	P114-ROX-012814
MC27954-4	01/28/14	00:00	DMMM	01/29/14	AQ	Trip Blank Water	TB-ROX-012814-HCL
MC27954-5	01/28/14	00:00	DMMM	01/29/14	AQ	Trip Blank Water	TB-ROX-012814-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC27954
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/6/2014 3:58:26 PM

3 Sample(s) and 2 Trip Blank(s) were collected on 01/28/2014 and were received at Accutest on 01/29/2014 properly preserved, at 0.3 Deg. C and intact. These Samples received an Accutest job number of MC27954. 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:** MSV1039

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28015-6MS, MC28015-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for 2,2-Dichloropropane, Dichlorodifluoromethane, Trichlorofluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Acetone, Chloroethane, Dichlorodifluoromethane, Trichlorofluoromethane 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, Acetone, Chloroethane, Dichlorodifluoromethane, 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 MC28015-6MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- MSV1039-BS for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1039-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Matrix AQ **Batch ID:** MSV1042

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28049-3MS, MC28049-3MSD 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 are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane, Methyl Tert Butyl Ether 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-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD of MSV1042-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- MSV1042-BS/BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1042-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compounds

Extractables by GCMS By Method SW846 8270D

Matrix AQ	Batch ID: OP36696

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Hexachlorocyclopentadiene, Benzoic Acid are outside control limits. Outside control limits due to possible matrix interferenee. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 3,3'-Dichlorobenzidine, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 3,3'-Dichlorobenzidine, 2,4-Dinitrophenol, Benzoic Acid are outside control limits for sample OP36696-MSD1. High RPD due to possible matrix interferenee and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36697

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- Sample(s) MC27954-1, MC27954-2, MC27954-3 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: OP36715

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD 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(MC27954).

Summary of Hits

Job Number: MC27954
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/28/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27954-1	P93B-ROX-012814					
Benzene		242000	500	450	ug/l	SW846 8260C
Phenol		74.0	5.5	0.56	ug/l	SW846 8270D
Di-n-butyl phthalate		0.45 J	5.5	0.43	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.72 J	2.2	0.54	ug/l	SW846 8270D
Phenanthrene		~~0.022 JB~~ U	0.055	0.014	ug/l	SW846 8270D BY SIM
MC27954-2	P93B-ROX-012814-DUP					
Benzene		293000	500	450	ug/l	SW846 8260C
Phenol		92.7	5.1	0.52	ug/l	SW846 8270D
Di-n-butyl phthalate		0.48 J	5.1	0.39	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		1.2 J	2.0	0.49	ng/l	SW846 8270D
Phenanthrene		~~0.024 JB~~ U	0.051	0.013	ug/l	SW846 8270D BY SIM
MC27954-3	P114-ROX-012814					
Acetone		142	10	2.8	ug/l	SW846 8260C
Benzene		1.3	0.50	0.45	ug/l	SW846 8260C
Methyl Tert Butyl Ether		15.3	1.0	0.43	ug/l	SW846 8260C
bis(2-Ethylhexyl)phthalate		0.66 J	2.2	0.53	ug/l	SW846 8270D
Anthracene		0.11	0.11	0.10	ug/l	SW846 8270D BY SIM
Phenanthrene		0.15 B	0.054	0.014	ug/l	SW846 8270D BY SIM
MC27954-4	TB-ROX-012814-HCL					
No hits reported in this sample.						
MC27954-5	TB-ROX-012814-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93B-ROX-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27646.D	1000	02/05/14	AMY	n/a	n/a	MSV1042
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	10000	2800	ug/l	
107-02-8	Acrolein	ND	25000	6300	ug/l	
107-13-1	Acrylonitrile	ND	5000	3500	ug/l	
71-43-2	Benzene	242000	500	450	ug/l	
108-86-1	Bromobenzene	ND	5000	440	ug/l	
74-97-5	Bromochloromethane	ND	5000	640	ug/l	
75-27-4	Bromodichloromethane	ND	1000	330	ug/l	
75-25-2	Bromoform	ND	1000	420	ug/l	
74-83-9	Bromomethane	ND	2000	1500	ug/l	
78-93-3	2-Bntanone (MEK)	ND	5000	1600	ug/l	
104-51-8	n-Butylbenzene	ND	5000	540	ug/l	
135-98-8	sec-Butylbenzene	ND	5000	580	ug/l	
98-06-6	tert-Butylbenzene	ND	5000	870	ug/l	
75-15-0	Carbon disulfide	ND	5000	590	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	620	ug/l	
108-90-7	Chlorobenzene	ND	1000	480	ug/l	
75-00-3	Chloroethane	ND	2000	840	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	1300	ug/l	
67-66-3	Chloroform	ND	1000	500	ug/l	
74-87-3	Chloromethane	ND	2000	1400	ug/l	
95-49-8	o-Chlorotoluene	ND	5000	550	ug/l	
106-43-4	p-Chlorotoluene	ND	5000	480	ug/l	
124-48-1	Dibromochloromethane	ND	1000	330	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	350	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	300	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	260	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2000	1200	ug/l	
75-34-3	1,1-Dichloroethane	ND	1000	370	ug/l	
107-06-2	1,2-Dichloroethane	ND	1000	350	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	670	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	540	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	540	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-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

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	970	ug/l	
594-20-7	2,2-Dichloropropane	ND	5000	1300	ug/l	
563-58-6	1,1-Dichloropropene	ND	5000	630	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	220	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	290	ug/l	
123-91-1	1,4-Dioxane	ND	25000	16000	ug/l	
97-63-2	Ethyl methacrylate	ND	5000	810	ug/l	
100-41-4	Ethylbenzene	ND	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND	5000	1300	ug/l	
591-78-6	2-Hexanone	ND	5000	2300	ug/l	
98-82-8	Isopropylbenzene	ND	5000	640	ug/l	
99-87-6	p-Isopropyltoluene	ND	5000	550	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1000	430	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	1300	ug/l	
74-95-3	Methylene bromide	ND	5000	430	ug/l	
75-09-2	Methylene chloride	ND	2000	410	ug/l	
91-20-3	Naphthalene	ND	5000	790	ug/l	
103-65-1	n-Propylbenzene	ND	5000	590	ug/l	
100-42-5	Styrene	ND	5000	490	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	460	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	420	ug/l	
127-18-4	Tetrachloroethene	ND	1000	610	ug/l	
108-88-3	Toluene	ND	1000	460	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5000	760	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5000	450	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	940	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	490	ug/l	
79-01-6	Trichloroethene	ND	1000	450	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	610	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5000	700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5000	470	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5000	1100	ug/l	
108-05-4	Vinyl Acetate	ND	5000	1300	ug/l	
75-01-4	Vinyl chloride	ND	1000	610	ug/l	
	m,p-Xylene	ND	1000	700	ug/l	
95-47-6	o-Xylene	ND	1000	410	ug/l	
1330-20-7	Xylene (total)	ND	1000	410	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-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	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	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte fouud iu associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P93B-ROX-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17515.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
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	1.4	ug/l	
95-57-8	2-Chloropbenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	74.0	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	0.45	5.5	0.43	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	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-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.72	2.2	0.54	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	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	24%		15-110%
4165-62-2	Phenol-d5	20%		15-110%
118-79-6	2,4,6-Tribromophenol	58%		15-110%
4165-60-0	Nitrobenzene-d5	41%		30-130%
321-60-8	2-Fluorobiphenyl	33%		30-130%
1718-51-0	Terphenyl-d14	58%		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-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87180.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
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	ND	0.11	0.076	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	0.055	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	ND	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.11	0.034	ng/l	
90-12-0	1-Methylnaphthalene	ND	0.22	0.055	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	~~0.022~~ LA	0.055	0.014	ug/l	JB LA
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	45%		30-130%
321-60-8	2-Fluorobiphenyl	32%		30-130%
1718-51-0	Terpbenyl-d14	57%		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-012814		
Lab Sample ID:	MC27954-1	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34410.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	84%		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-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27576.D	1000	02/03/14	AMY	n/a	n/a	MSV1039
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	10000	2800	ug/l	
107-02-8	Acrolein	ND	25000	6300	ug/l	
107-13-1	Acrylonitrile	ND	5000	3500	ug/l	
71-43-2	Benzene	293000	500	450	ug/l	
108-86-1	Bromobenzene	ND	5000	440	ug/l	
74-97-5	Bromochloromethane	ND	5000	640	ug/l	
75-27-4	Bromodichloromethane	ND	1000	330	ug/l	
75-25-2	Bromoform	ND	1000	420	ug/l	
74-83-9	Bromomethane	ND	2000	1500	ug/l	
78-93-3	2-Butanone (MEK)	ND	5000	1600	ug/l	
104-51-8	n-Butylbenzene	ND	5000	540	ug/l	
135-98-8	sec-Butylbenzene	ND	5000	580	ug/l	
98-06-6	tert-Butylbenzene	ND	5000	870	ug/l	
75-15-0	Carbon disulfide	ND	5000	590	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	620	ng/l	
108-90-7	Chlorobenzene	ND	1000	480	ug/l	
75-00-3	Chloroethane	ND	2000	840	ng/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	1300	ug/l	
67-66-3	Chloroform	ND	1000	500	ug/l	
74-87-3	Chloromethane	ND	2000	1400	ug/l	
95-49-8	o-Chlorotoluene	ND	5000	550	ug/l	
106-43-4	p-Chlorotoluene	ND	5000	480	ug/l	
124-48-1	Dibromochloromethane	ND	1000	330	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	350	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	300	ng/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	260	ng/l	
75-71-8	Dichlorodifluoromethane	ND	2000	1200	ug/l	
75-34-3	1,1-Dichloroetbane	ND	1000	370	ug/l	
107-06-2	1,2-Dicbloroethane	ND	1000	350	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	670	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	540	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	540	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-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

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	970	ug/l	
594-20-7	2,2-Dichloropropane	ND	5000	1300	ug/l	
563-58-6	1,1-Dichloropropene	ND	5000	630	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	220	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	290	ug/l	
123-91-1	1,4-Dioxane	ND	25000	16000	ug/l	
97-63-2	Ethyl methacrylate	ND	5000	810	ug/l	
100-41-4	Ethylbenzene	ND	1000	380	ug/l	
87-68-3	Hexachlorobutadiene	ND	5000	1300	ug/l	
591-78-6	2-Hexanone	ND	5000	2300	ug/l	
98-82-8	Isopropylbenzene	ND	5000	640	ug/l	
99-87-6	p-Isopropyltoluene	ND	5000	550	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1000	430	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	1300	ug/l	
74-95-3	Methylene bromide	ND	5000	430	ug/l	
75-09-2	Methylene chloride	ND	2000	410	ug/l	
91-20-3	Naphthalene	ND	5000	790	ug/l	
103-65-1	n-Propylbenzene	ND	5000	590	ug/l	
100-42-5	Styrene	ND	5000	490	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	460	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	420	ug/l	
127-18-4	Tetrachloroethene	ND	1000	610	ug/l	
108-88-3	Toluene	ND	1000	460	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5000	760	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5000	450	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	940	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	490	ug/l	
79-01-6	Trichloroethene	ND	1000	450	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	610	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5000	700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5000	470	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5000	1100	ug/l	
108-05-4	Vinyl Acetate	ND	5000	1300	ug/l	
75-01-4	Vinyl chloride	ND	1000	610	ug/l	
	m,p-Xylene	ND	1000	700	ug/l	
95-47-6	o-Xylene	ND	1000	410	ug/l	
1330-20-7	Xylene (total)	ND	1000	410	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-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		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:	P93B-ROX-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17516.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.59	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	92.7	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.86	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.58	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.93	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.66	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.48	5.1	0.39	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	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-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	1.2	2.0	0.49	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.44	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.4	ug/l	
98-95-3	Nitrobeuzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	44%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	53%		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	

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-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87181.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
Run #2							

	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.070	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.093	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	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	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	ND	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.075	ug/l	
85-01-8	Phenanthrene	~~0.024~~	0.051	0.013	ug/l	JB
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		30-130%
321-60-8	2-Fluorobiphenyl	50%		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:	P93B-ROX-012814-DUP		
Lab Sample ID:	MC27954-2	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34411.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	81%		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-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27572.D	1	02/03/14	AMY	n/a	n/a	MSV1039
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	142	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1.3	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ng/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	15.3	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		70-130%
460-00-4	4-Bromofluorobenzene	109%		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:	P114-ROX-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17517.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.66	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	47%		15-110%
4165-62-2	Pheuol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	88%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	53%		30-130%
1718-51-0	Terphenyl-d14	82%		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:	P114-ROX-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87182.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
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	0.11	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	ng/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.11	0.035	ug/l	
206-44-0	Flnoranthene	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	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.15	0.054	0.014	ug/l	B
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	71%		30-130%
321-60-8	2-Fluorobiphenyl	51%		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:	P114-ROX-012814		
Lab Sample ID:	MC27954-3	Date Sampled:	01/28/14
Matrix:	AQ - Ground Water	Date Received:	01/29/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34412.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	86%		36-173%
460-00-4	Bromofluorobenzene (S)	37%		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-012814-HCL		
Lab Sample ID:	MC27954-4	Date Sampled:	01/28/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27557.D	1	02/03/14	AMY	n/a	n/a	MSV1039
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012814-HCL		
Lab Sample ID:	MC27954-4	Date Sampled:	01/28/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobeuzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroetbane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylhenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-012814-HCL		
Lab Sample ID:	MC27954-4	Date Sampled:	01/28/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/29/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromoflnorobenzene	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-012814-ST		
Lab Sample ID:	MC27954-5	Date Sampled:	01/28/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/29/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34413.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	80%		36-173%
460-00-4	Bromofluorobenzene (S)	63%		36-173%

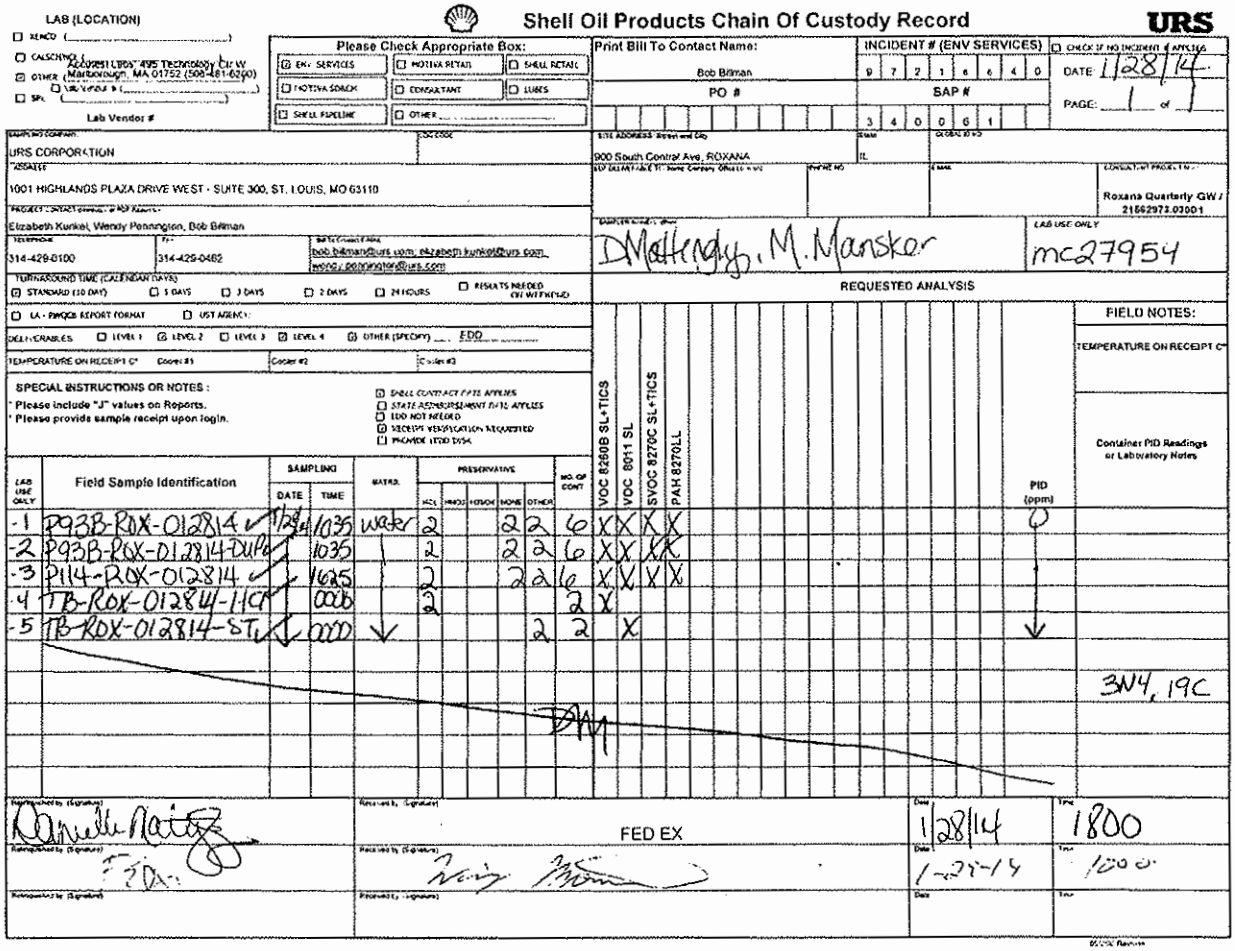
ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

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

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 Ctr W, Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SDACK ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT IS APPLIED

DATE: 1/28/14

PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION

CO CODE:

SITE ADDRESS (Street and City): 900 South Central Ave, ROXANA

State: IL

GLOBAL ID NO:

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

PROJECT CONTACT (Email or PDF Reports): Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100

FAX: 314-429-0462

INFO CONTACT EMAIL: bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

SAMPLER NAME(S) (Print): D Mattingly, M. Mansker

LAB USE ONLY: mc27954

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562973.03001

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 REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT 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	NONE	OTHER	NO. OF CONT	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93B-ROX-012814	1/28/14	1035	water	2			2	2	6	X	X	X	X	0	
-2	P93B-ROX-012814-DUP		1035		2			2	2	6	X	X	X	X		
-3	P114-ROX-012814		1625		2			2	2	6	X	X	X	X		
-4	TB-ROX-012814-HCl		0000		2					2	X					
-5	TB-ROX-012814-ST		0000						2	2		X				
																3N4, 19C

DM

Relinquished by (Signature)	Received by (Signature)	Date	Time
Danielle Naitz	FED EX	1/28/14	1800
FEDEX	[signature]	1-29-14	1000

0.3°C

5.1

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MC27954: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27954 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/29/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun		
3. Cooler media:	Ice (bag)		

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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MC27954: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27954

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27954-1 Collected: 28-JAN-14 10:35 By: DMMM Received: 29-JAN-14 By: P93B-ROX-012814						
MC27954-1	SW846 8270D	31-JAN-14 18:27	KR	29-JAN-14	MEW	AB8270SL+
MC27954-1	SW846 8270D BY SIM	31-JAN-14 18:32	KR	29-JAN-14	MEW	B8270SIMSL
MC27954-1	SW846 8011	31-JAN-14 20:43	NK	30-JAN-14	MT	V8011SL
MC27954-1	SW846 8260C	05-FEB-14 13:21	AMY			V8260SL+
MC27954-2 Collected: 28-JAN-14 10:35 By: DMMM Received: 29-JAN-14 By: P93B-ROX-012814-DUP						
MC27954-2	SW846 8270D	31-JAN-14 18:51	KR	29-JAN-14	MEW	AB8270SL+
MC27954-2	SW846 8270D BY SIM	31-JAN-14 18:54	KR	29-JAN-14	MEW	B8270SIMSL
MC27954-2	SW846 8011	31-JAN-14 21:06	NK	30-JAN-14	MT	V8011SL
MC27954-2	SW846 8260C	03-FEB-14 19:17	AMY			V8260SL+
MC27954-3 Collected: 28-JAN-14 16:25 By: DMMM Received: 29-JAN-14 By: P114-ROX-012814						
MC27954-3	SW846 8270D	31-JAN-14 19:15	KR	29-JAN-14	MEW	AB8270SL+
MC27954-3	SW846 8270D BY SIM	31-JAN-14 19:17	KR	29-JAN-14	MEW	B8270SIMSL
MC27954-3	SW846 8011	31-JAN-14 21:28	NK	30-JAN-14	MT	V8011SL
MC27954-3	SW846 8260C	03-FEB-14 17:32	AMY			V8260SL+
MC27954-4 Collected: 28-JAN-14 00:00 By: DMMM Received: 29-JAN-14 By: TB-ROX-012814-HCL						
MC27954-4	SW846 8260C	03-FEB-14 10:55	AMY			V8260SL+
MC27954-5 Collected: 28-JAN-14 00:00 By: DMMM Received: 29-JAN-14 By: TB-ROX-012814-ST						
MC27954-5	SW846 8011	31-JAN-14 21:51	NK	30-JAN-14	MT	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/29/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27954-1.2	Walk In Ref #22	Thomas Abruzzise	01/29/14 14:45	Retrieve from Storage
MC27954-1.3	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27954-1.3	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27954-1.3	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27954-1.3	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27954-1.4	VOC Ref #3	Amy Min Yang	02/03/14 10:15	Retrieve from Storage
MC27954-1.4	Amy Min Yang	GCMSV	02/03/14 10:15	Load on Instrument
MC27954-1.4	GCMSV	Amy Min Yaog	02/05/14 10:17	Unload from Instrument
MC27954-1.4	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27954-1.4	VOC Ref #3	Amy Min Yang	02/05/14 10:36	Retrieve from Storage
MC27954-1.4	Amy Min Yang	GCMSV	02/05/14 10:37	Load on Instrument
MC27954-1.4	GCMSV	Amy Min Yang	02/07/14 17:08	Uoload from Instrument
MC27954-1.4	Amy Min Yang	VOC Ref #3	02/07/14 17:08	Return to Storage
MC27954-1.6	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27954-2.1	Walk In Ref #22	Thomas Abruzzise	01/29/14 14:45	Retrieve from Storage
MC27954-2.3	VOC Ref #3	Amy Min Yang	02/03/14 10:15	Retrieve from Storage
MC27954-2.3	Amy Min Yang	GCMSV	02/03/14 10:15	Load on Instrument
MC27954-2.3	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27954-2.3	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27954-2.4	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27954-2.4	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27954-2.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27954-2.4	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27954-2.5	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27954-3.2	Walk In Ref #22	Thomas Abruzzise	01/29/14 14:45	Retrieve from Storage
MC27954-3.3	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27954-3.3	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27954-3.3	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27954-3.3	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27954-3.4	VOC Ref #3	Amy Min Yang	02/03/14 10:15	Retrieve from Storage
MC27954-3.4	Amy Min Yang	GCMSV	02/03/14 10:15	Load on Instrument
MC27954-3.4	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27954-3.4	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/29/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27954-3.5	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27954-4.1	VOC Ref #3	Amy Min Yang	02/03/14 10:15	Retrieve from Storage
MC27954-4.1	Amy Min Yang	GCMSV	02/03/14 10:15	Load on Instrument
MC27954-4.1	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27954-4.1	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27954-5.2	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage

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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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-MB	V27556.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbeuzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichloroheuzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-MB	V27556.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethaue	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ng/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-MB	V27556.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethaue	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Metbylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ng/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-BS	V27554.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	35.6	71	70-130
107-02-8	Acrolein	50	52.6	105	70-130
107-13-1	Acrylonitrile	100	88.7	89	70-130
71-43-2	Benzene	50	53.7	107	70-130
108-86-1	Bromobenzene	50	49.9	100	70-130
74-97-5	Bromochloromethane	50	54.2	108	70-130
75-27-4	Bromodichloromethane	50	60.2	120	70-130
75-25-2	Bromoform	50	43.6	87	70-130
74-83-9	Bromomethane	50	54.3	109	70-130
78-93-3	2-Butanone (MEK)	50	38.5	77	70-130
104-51-8	n-Butylbenzene	50	54.4	109	70-130
135-98-8	sec-Butylbenzene	50	55.0	110	70-130
98-06-6	tert-Butylbenzene	50	56.6	113	70-130
75-15-0	Carbon disulfide	50	49.7	99	70-130
56-23-5	Carbon tetrachloride	50	63.8	128	70-130
108-90-7	Chlorobenzene	50	44.3	89	70-130
75-00-3	Chloroethane	50	63.8	128	70-130
110-75-8	2-Chloroethyl vinyl ether	50	266	532* [a]	70-130
67-66-3	Chloroform	50	54.1	108	70-130
74-87-3	Chloromethane	50	57.4	115	70-130
95-49-8	o-Chlorotoluene	50	49.9	100	70-130
106-43-4	p-Chlorotoluene	50	51.7	103	70-130
124-48-1	Dibromochloromethane	50	55.4	111	70-130
95-50-1	1,2-Dichlorobenzene	50	46.4	93	70-130
541-73-1	1,3-Dichlorobenzene	50	47.2	94	70-130
106-46-7	1,4-Dichlorobenzene	50	47.2	94	70-130
75-71-8	Dichlorodifluoromethane	50	67.0	134* [b]	70-130
75-34-3	1,1-Dichloroethane	50	55.7	111	70-130
107-06-2	1,2-Dichloroethane	50	58.0	116	70-130
75-35-4	1,1-Dichloroethene	50	55.6	111	70-130
156-59-2	cis-1,2-Dichloroethene	50	53.9	108	70-130
156-60-5	trans-1,2-Dichloroethene	50	54.0	108	70-130
78-87-5	1,2-Dichloropropane	50	52.7	105	70-130
142-28-9	1,3-Dichloropropane	50	48.7	97	70-130
594-20-7	2,2-Dichloropropane	50	69.3	139* [b]	70-130
563-58-6	1,1-Dichloropropene	50	56.4	113	70-130

* = Outside of Control Limits.

6.2.1

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Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-BS	V27554.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	51.2	102	70-130
10061-02-6	trans-1,3-Dichloropropene	50	53.7	107	70-130
123-91-1	1,4-Dioxane	250	227	91	70-130
97-63-2	Ethyl methacrylate	50	48.8	98	77-137
100-41-4	Ethylbenzene	50	50.9	102	70-130
87-68-3	Hexachlorobutadiene	50	56.6	113	70-130
591-78-6	2-Hexanone	50	37.6	75	70-130
98-82-8	Isopropylbenzene	50	56.4	113	70-130
99-87-6	p-Isopropyltoluene	50	53.8	108	70-130
1634-04-4	Methyl Tert Butyl Ether	50	61.7	123	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	56.3	113	70-130
74-95-3	Methylene bromide	50	55.1	110	70-130
75-09-2	Methylene chloride	50	50.4	101	70-130
91-20-3	Naphthalene	50	52.6	105	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	46.4	93	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	51.9	104	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	49.1	98	70-130
127-18-4	Tetrachloroethene	50	51.2	102	70-130
108-88-3	Toluene	50	57.4	115	70-130
87-61-6	1,2,3-Trichlorobenzene	50	59.1	118	70-130
120-82-1	1,2,4-Trichlorobenzene	50	58.5	117	70-130
71-55-6	1,1,1-Trichloroethane	50	62.2	124	70-130
79-00-5	1,1,2-Trichloroethane	50	52.7	105	70-130
79-01-6	Trichloroethene	50	55.6	111	70-130
75-69-4	Trichlorofluoromethane	50	69.8	140* [b]	70-130
96-18-4	1,2,3-Trichloropropane	50	52.9	106	70-130
95-63-6	1,2,4-Trimethylbenzene	50	55.1	110	70-130
108-67-8	1,3,5-Trimethylbenzene	50	55.6	111	70-130
108-05-4	Vinyl Acetate	50	56.5	113	70-130
75-01-4	Vinyl chloride	50	53.1	106	70-130
	m,p-Xylene	100	85.2	85	70-130
95-47-6	o-Xylene	50	42.9	86	70-130
1330-20-7	Xylene (total)	150	128	85	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1039-BS	V27554.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	101%	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

6

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	45.5	91	42.0	84	8	70-130/25
107-02-8	Acrolein	50	61.5	123	61.5	123	0	70-130/25
107-13-1	Acrylonitrile	100	88.2	88	89.9	90	2	70-130/25
71-43-2	Benzene	50	54.1	108	53.9	108	0	70-130/25
108-86-1	Bromobenzene	50	49.3	99	49.6	99	1	70-130/25
74-97-5	Bromochloromethane	50	55.1	110	54.6	109	1	70-130/25
75-27-4	Bromodichloromethane	50	56.1	112	55.5	111	1	70-130/25
75-25-2	Bromoform	50	42.6	85	42.0	84	1	70-130/25
74-83-9	Bromomethane	50	50.5	101	50.2	100	1	70-130/25
78-93-3	2-Butanone (MEK)	50	45.9	92	44.5	89	3	70-130/25
104-51-8	n-Butylbenzene	50	53.1	106	52.4	105	1	70-130/25
135-98-8	sec-Butylbenzene	50	54.2	108	54.1	108	0	70-130/25
98-06-6	tert-Butylbenzene	50	52.6	105	51.6	103	2	70-130/25
75-15-0	Carbon disulfide	50	47.8	96	48.5	97	1	70-130/25
56-23-5	Carbon tetrachloride	50	55.9	112	54.7	109	2	70-130/25
108-90-7	Chlorobenzene	50	44.3	89	44.0	88	1	70-130/25
75-00-3	Chloroethane	50	60.6	121	60.0	120	1	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	144	288* [a]	213	426* [a]	39* [a]	70-130/25
67-66-3	Chloroform	50	51.8	104	52.1	104	1	70-130/25
74-87-3	Chloromethane	50	55.2	110	50.5	101	9	70-130/25
95-49-8	o-Chlorotoluene	50	48.6	97	48.4	97	0	70-130/25
106-43-4	p-Chlorotoluene	50	49.7	99	49.3	99	1	70-130/25
124-48-1	Dibromochloromethane	50	53.6	107	53.4	107	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	45.9	92	45.9	92	0	70-130/25
541-73-1	1,3-Dichlorobenzene	50	46.6	93	46.1	92	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	46.3	93	45.9	92	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	54.3	109	54.9	110	1	70-130/25
75-34-3	1,1-Dichloroethane	50	54.3	109	54.2	108	0	70-130/25
107-06-2	1,2-Dichloroethane	50	51.5	103	51.1	102	1	70-130/25
75-35-4	1,1-Dichloroethene	50	54.3	109	54.8	110	1	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	55.3	111	55.8	112	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.0	108	54.1	108	0	70-130/25
78-87-5	1,2-Dichloropropane	50	52.0	104	51.8	104	0	70-130/25
142-28-9	1,3-Dichloropropane	50	48.7	97	48.4	97	1	70-130/25
594-20-7	2,2-Dichloropropane	50	65.9	132* [b]	63.7	127	3	70-130/25
563-58-6	1,1-Dichloropropene	50	53.4	107	52.5	105	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

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	50.0	100	49.7	99	1	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	52.0	104	51.3	103	1	70-130/25
123-91-1	1,4-Dioxane	250	234	94	234	94	0	70-130/25
97-63-2	Ethyl methacrylate	50	49.5	99	49.1	98	1	77-137/25
100-41-4	Ethylbenzene	50	50.8	102	50.1	100	1	70-130/25
87-68-3	Hexachlorobutadiene	50	54.3	109	53.5	107	1	70-130/25
591-78-6	2-Hexanone	50	41.6	83	39.5	79	5	70-130/25
98-82-8	Isopropylbenzene	50	55.0	110	55.0	110	0	70-130/25
99-87-6	p-Isopropyltoluene	50	52.8	106	51.8	104	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	58.6	117	58.9	118	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	55.4	111	55.1	110	1	70-130/25
74-95-3	Methylene bromide	50	52.5	105	51.9	104	1	70-130/25
75-09-2	Methylene chloride	50	51.0	102	51.7	103	1	70-130/25
91-20-3	Naphthalene	50	50.7	101	52.3	105	3	70-130/25
103-65-1	n-Propylbenzene	50	52.7	105	52.0	104	1	70-130/25
100-42-5	Styrene	50	46.2	92	46.5	93	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	50.0	100	49.4	99	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.7	97	48.6	97	0	70-130/25
127-18-4	Tetrachloroethene	50	50.5	101	49.5	99	2	70-130/25
108-88-3	Toluene	50	57.2	114	56.3	113	2	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	55.3	111	56.9	114	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	56.3	113	57.4	115	2	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.4	117	57.7	115	1	70-130/25
79-00-5	1,1,2-Trichloroethane	50	52.9	106	52.6	105	1	70-130/25
79-01-6	Trichloroethene	50	54.6	109	54.0	108	1	70-130/25
75-69-4	Trichlorofluoromethane	50	58.0	116	56.7	113	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	50.7	101	50.5	101	0	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	53.5	107	53.0	106	1	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	54.1	108	53.5	107	1	70-130/25
108-05-4	Vinyl Acetate	50	54.1	108	54.5	109	1	70-130/25
75-01-4	Vinyl chloride	50	48.5	97	49.0	98	1	70-130/25
	m,p-Xylene	100	86.1	86	84.4	84	2	70-130/25
95-47-6	o-Xylene	50	43.2	86	43.1	86	0	70-130/25
1330-20-7	Xylene (total)	150	129	86	127	85	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	98%	70-130%
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	100%	70-130%

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

6.3.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28015-6MS	V27573.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6MSD	V27574.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6	V27558.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	MC28015-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	149	60* [a]	145	58* [a]	3	70-130/30
107-02-8	Acrolein	ND		250	268	107	265	106	1	70-130/30
107-13-1	Acrylonitrile	ND		500	460	92	451	90	2	70-130/30
71-43-2	Benzene	ND		250	278	111	271	108	3	70-130/30
108-86-1	Bromobenzene	ND		250	258	103	256	102	1	70-130/30
74-97-5	Bromochloromethane	ND		250	282	113	277	111	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	296	118	287	115	3	70-130/30
75-25-2	Bromoform	ND		250	210	84	208	83	1	70-130/30
74-83-9	Bromomethane	ND		250	288	115	278	111	4	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	186	74	185	74	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	274	110	272	109	1	70-130/30
135-98-8	sec-Butylbenzene	ND		250	280	112	278	111	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	282	113	277	111	2	70-130/30
75-15-0	Carbon disulfide	ND		250	258	103	252	101	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	310	124	297	119	4	70-130/30
108-90-7	Chlorobenzene	ND		250	228	91	224	90	2	70-130/30
75-00-3	Chloroethane	ND		250	347	139* [a]	331	132* [a]	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	112	45* [a]	41.9	17* [a]	91* [b]	70-130/30
67-66-3	Chloroform	ND		250	278	111	266	106	4	70-130/30
74-87-3	Chloromethane	ND		250	315	126	302	121	4	70-130/30
95-49-8	o-Chlorotoluene	ND		250	257	103	253	101	2	70-130/30
106-43-4	p-Chlorotoluene	ND		250	263	105	258	103	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	276	110	270	108	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	233	93	232	93	0	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	241	96	238	95	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	237	95	237	95	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	351	140* [a]	336	134* [a]	4	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	291	116	280	112	4	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	280	112	273	109	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	298	119	283	113	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	284	114	276	110	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	283	113	275	110	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	270	108	265	106	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	245	98	242	97	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	341	136* [a]	335	134* [a]	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	283	113	273	109	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28015-6MS	V27573.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6MSD	V27574.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6	V27558.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Compound	MC28015-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	250	100	243	97	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	263	105	260	104	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1010	81	1210	97	18	70-130/30
97-63-2	Ethyl methacrylate	ND		250	245	98	241	96	2	72-139/30
100-41-4	Ethylbenzene	ND		250	264	106	258	103	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	273	109	275	110	1	70-130/30
591-78-6	2-Hexanone	ND		250	185	74	181	72	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	287	115	282	113	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	270	108	268	107	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	299	120	296	118	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	279	112	271	108	3	70-130/30
74-95-3	Methylene bromide	ND		250	269	108	264	106	2	70-130/30
75-09-2	Methylene chloride	ND		250	266	106	257	103	3	70-130/30
91-20-3	Naphthalene	ND		250	221	88	253	101	14	70-130/30
103-65-1	n-Propylbenzene	ND		250	275	110	270	108	2	70-130/30
100-42-5	Styrene	ND		250	240	96	235	94	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	263	105	257	103	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	245	98	245	98	0	70-130/30
127-18-4	Tetrachloroethene	1.0		250	266	106	258	103	3	70-130/30
108-88-3	Toluene	ND		250	292	117	284	114	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	259	104	282	113	9	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	278	111	287	115	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	312	125	300	120	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	266	106	263	105	1	70-130/30
79-01-6	Trichloroethene	ND		250	287	115	275	110	4	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	341	136* [a]	321	128	6	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	253	101	255	102	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	279	112	276	110	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	282	113	279	112	1	70-130/30
108-05-4	Vinyl Acetate	ND		250	283	113	279	112	1	70-130/30
75-01-4	Vinyl chloride	ND		250	286	114	273	109	5	70-130/30
	m,p-Xylene	ND		500	439	88	435	87	1	70-130/30
95-47-6	o-Xylene	ND		250	221	88	216	86	2	70-130/30
1330-20-7	Xylene (total)	ND		750	660	88	651	87	1	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28015-6MS	V27573.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6MSD	V27574.D	5	02/03/14	AMY	n/a	n/a	MSV1039
MC28015-6	V27558.D	1	02/03/14	AMY	n/a	n/a	MSV1039

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

MC27954-2, MC27954-3, MC27954-4

CAS No.	Surrogate Recoveries	MS	MSD	MC28015-6	Limits
1868-53-7	Dibromofluoromethane	100%	99%	111%	70-130%
2037-26-5	Toluene-D8	101%	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	101%	103%	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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Compound	MC28049-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	185	74	185	74	0	70-130/30
107-02-8	Acrolein	ND		250	262	105	260	104	1	70-130/30
107-13-1	Acrylonitrile	ND		500	491	98	478	96	3	70-130/30
71-43-2	Benzene	ND		250	298	119	283	113	5	70-130/30
108-86-1	Bromobenzene	ND		250	273	109	257	103	6	70-130/30
74-97-5	Bromochloromethane	ND		250	298	119	293	117	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	305	122	291	116	5	70-130/30
75-25-2	Bromoform	ND		250	225	90	221	88	2	70-130/30
74-83-9	Bromomethane	ND		250	270	108	254	102	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	209	84	210	84	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	290	116	278	111	4	70-130/30
135-98-8	sec-Butylbenzene	ND		250	297	119	283	113	5	70-130/30
98-06-6	tert-Butylbenzene	ND		250	286	114	272	109	5	70-130/30
75-15-0	Carbon disulfide	ND		250	270	108	260	104	4	70-130/30
56-23-5	Carbon tetrachloride	ND		250	311	124	297	119	5	70-130/30
108-90-7	Chlorobenzene	ND		250	245	98	233	93	5	70-130/30
75-00-3	Chloroethane	ND		250	321	128	305	122	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	287	115	275	110	4	70-130/30
74-87-3	Chloromethane	ND		250	293	117	272	109	7	70-130/30
95-49-8	o-Chlorotoluene	ND		250	268	107	251	100	7	70-130/30
106-43-4	p-Chlorotoluene	ND		250	271	108	258	103	5	70-130/30
124-48-1	Dibromochloromethane	ND		250	293	117	280	112	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	249	100	238	95	5	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	253	101	239	96	6	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	251	100	240	96	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	337	135* [a]	317	127	6	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	305	122	291	116	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	286	114	274	110	4	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	314	126	300	120	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	305	122	295	118	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	301	120	287	115	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	287	115	273	109	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	268	107	256	102	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	339	136* [a]	335	134* [a]	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	300	120	283	113	6	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Compound	MC28049-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	264	106	253	101	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	281	112	271	108	4	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1250	100	1310	105	5	70-130/30
97-63-2	Ethyl methacrylate	ND		250	269	108	260	104	3	72-139/30
100-41-4	Ethylbenzene	ND		250	283	113	268	107	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	289	116	283	113	2	70-130/30
591-78-6	2-Hexanone	ND		250	201	80	195	78	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	304	122	286	114	6	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	286	114	272	109	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	330	132* [a]	319	128	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	303	121	296	118	2	70-130/30
74-95-3	Methylene bromide	ND		250	288	115	278	111	4	70-130/30
75-09-2	Methylene chloride	ND		250	284	114	271	108	5	70-130/30
91-20-3	Naphthalene	ND		250	281	112	277	111	1	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	272	109	6	70-130/30
100-42-5	Styrene	ND		250	259	104	247	99	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	275	110	264	106	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	268	107	254	102	5	70-130/30
127-18-4	Tetrachloroethene	ND		250	284	114	269	108	5	70-130/30
108-88-3	Toluene	0.88	J	250	312	124	295	118	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	274	110	293	117	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	298	119	299	120	0	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	317	127	308	123	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	291	116	278	111	5	70-130/30
79-01-6	Trichloroethene	ND		250	301	120	285	114	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	311	124	296	118	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	275	110	267	107	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	294	118	276	110	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	295	118	282	113	5	70-130/30
108-05-4	Vinyl Acetate	ND		250	303	121	292	117	4	70-130/30
75-01-4	Vinyl chloride	ND		250	270	108	253	101	7	70-130/30
	m,p-Xylene	ND		500	467	93	446	89	5	70-130/30
95-47-6	o-Xylene	ND		250	236	94	225	90	5	70-130/30
1330-20-7	Xylene (total)	ND		750	703	94	671	89	5	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27954-1

CAS No.	Surrogate Recoveries	MS	MSD	MC28049-3	Limits
1868-53-7	Dibromofluoromethane	98%	98%	109%	70-130%
2037-26-5	Toluene-D8	100%	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	99%	99%	103%	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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1039-CC1019	Injection Date:	02/03/14
Lab File ID:	V27553.D	Injection Time:	09:09
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	464658	6.55	586326	7.73	347957	11.07	381732	13.28	148230	3.50
Upper Limit [a]	929316	7.05	1172652	8.23	695914	11.57	763464	13.78	296460	4.00
Lower Limit [b]	232329	6.05	293163	7.23	173979	10.57	190866	12.78	74115	3.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1039-BS	465754	6.55	588801	7.73	349487	11.07	382234	13.28	163313	3.50
MSV1039-MB	382183	6.55	515666	7.73	305745	11.07	301809	13.28	142211	3.50
MC27954-4	359374	6.55	488507	7.73	293990	11.07	287308	13.28	131014	3.51
MC28015-6	346616	6.55	477079	7.73	285821	11.07	283833	13.28	132562	3.51
ZZZZZZ	339488	6.55	466157	7.74	280607	11.07	277204	13.28	121120	3.51
ZZZZZZ	332338	6.56	460221	7.74	278112	11.07	276752	13.28	115199	3.51
ZZZZZZ	321963	6.56	444324	7.73	270121	11.07	270792	13.28	118153	3.51
ZZZZZZ	432341	6.56	549141	7.74	334752	11.07	331658	13.28	155688	3.51
ZZZZZZ	502818	6.56	653681	7.74	405951	11.07	405165	13.28	198605	3.52
ZZZZZZ	424208	6.56	588980	7.74	342115	11.07	334438	13.28	157968	3.52
ZZZZZZ	469421	6.56	619977	7.74	370882	11.07	371886	13.28	159131	3.51
ZZZZZZ	482537	6.55	631095	7.73	374927	11.07	372375	13.28	167264	3.50
ZZZZZZ	430582	6.55	597099	7.73	345979	11.07	343668	13.28	149219	3.50
ZZZZZZ	424344	6.56	581113	7.74	341448	11.07	335755	13.28	148481	3.51
ZZZZZZ	418517	6.55	571351	7.74	334962	11.07	330590	13.28	159437	3.51
ZZZZZZ	396394	6.56	546128	7.74	325071	11.07	319942	13.28	156328	3.51
MC27954-3	398866	6.55	543295	7.74	327601	11.07	341302	13.28	156669	3.52
MC28015-6MS	464226	6.55	596214	7.73	349230	11.07	382975	13.28	157817	3.51
MC28015-6MSD	479889	6.55	622022	7.73	361430	11.07	391299	13.28	171013	3.51
MC27954-2	401640	6.55	575105	7.73	328382	11.07	318669	13.28	147706	3.51
ZZZZZZ	406795	6.55	564514	7.73	336895	11.07	326523	13.28	152823	3.50
ZZZZZZ	443647	6.55	588235	7.73	346880	11.07	345749	13.28	161650	3.51

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

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

Volatile Internal Standard Area Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1042-CC1019	Injection Date:	02/05/14
Lab File ID:	V27637.D	Injection Time:	09:23
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	573160	6.57	750824	7.75	448659	11.08	500167	13.29	217245	3.53
Upper Limit [a]	1146320	7.07	1501648	8.25	897318	11.58	1000334	13.79	434490	4.03
Lower Limit [b]	286580	6.07	375412	7.25	224330	10.58	250084	12.79	108623	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
MSV1042-BS	555130	6.56	724931	7.74	424053	11.08	470259	13.29	206420	3.52
MSV1042-BSD	538538	6.57	709202	7.75	414373	11.08	454579	13.29	201515	3.53
MSV1042-MB	449418	6.58	613800	7.76	361859	11.08	359541	13.30	174146	3.54
ZZZZZZ	440684	6.58	602223	7.75	358457	11.09	359022	13.30	164865	3.53
ZZZZZZ	416468	6.59	582738	7.76	345849	11.09	343012	13.30	157790	3.54
ZZZZZZ	407498	6.58	572752	7.76	336878	11.09	336034	13.30	149557	3.53
ZZZZZZ	408385	6.58	567291	7.76	336532	11.09	334838	13.30	151836	3.53
MC27954-1	399233	6.59	568956	7.76	331860	11.09	336421	13.30	154265	3.54
ZZZZZZ	381055	6.59	554311	7.77	326546	11.09	326009	13.30	155274	3.55
MC28049-3	383833	6.60	534444	7.77	323398	11.09	321121	13.30	160164	3.55
ZZZZZZ	378529	6.60	521332	7.77	311450	11.09	314020	13.30	158569	3.55
ZZZZZZ	423697	6.59	543642	7.77	330198	11.09	341592	13.30	191785	3.54
ZZZZZZ	441963	6.59	581854	7.77	354399	11.09	393174	13.30	162866	3.55
ZZZZZZ	446323	6.59	609116	7.76	349025	11.09	371278	13.30	193074	3.54
MC28049-3MS	488825	6.59	636264	7.77	370007	11.09	409649	13.30	190735	3.54
MC28049-3MSD	509603	6.59	668384	7.76	385716	11.09	431833	13.30	201141	3.54
ZZZZZZ	439595	6.59	578937	7.77	341341	11.09	349093	13.30	173891	3.54
ZZZZZZ	439130	6.59	688016	7.76	357658	11.09	366161	13.30	183145	3.53
ZZZZZZ	430828	6.59	583617	7.76	342244	11.09	363034	13.30	174965	3.53
ZZZZZZ	423083	6.59	586275	7.76	340582	11.09	358478	13.30	175920	3.54
ZZZZZZ	429093	6.59	598294	7.77	348217	11.09	361453	13.30	180788	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.

Volatile Surrogate Recovery Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27954-1	V27646.D	108.0	97.0	102.0
MC27954-2	V27576.D	108.0	97.0	105.0
MC27954-3	V27572.D	108.0	100.0	109.0
MC27954-4	V27557.D	110.0	100.0	105.0
MC28015-6MS	V27573.D	100.0	101.0	100.0
MC28015-6MSD	V27574.D	99.0	100.0	101.0
MC28049-3MS	V27653.D	98.0	100.0	99.0
MC28049-3MSD	V27654.D	98.0	100.0	99.0
MSV1039-BS	V27554.D	98.0	101.0	101.0
MSV1039-MB	V27556.D	107.0	99.0	105.0
MSV1042-BS	V27638.D	96.0	100.0	98.0
MSV1042-BSD	V27639.D	98.0	99.0	100.0
MSV1042-MB	V27641.D	104.0	99.0	103.0

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

6.6.1

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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Peutachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Dipheuylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Diuitrotolueue	ND	10	0.68	ug/l	
606-20-2	2,6-Diuitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	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	33%	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	76%	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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-MB	I87170.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27954-1, MC27954-2, MC27954-3

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	ng/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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.023	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	78%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

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	44.8	90	30-130
59-50-7	4-Chloro-3-methyl phenol	50	48.5	97	30-130
120-83-2	2,4-Dichloropheuol	50	51.3	103	30-130
105-67-9	2,4-Dimethylphenol	50	41.8	84	30-130
51-28-5	2,4-Dinitrophenol	50	50.0	100	30-130
534-52-1	4,6-Dinitro-o-cresol	50	54.1	108	30-130
95-48-7	2-Methylphenol	50	41.6	83	30-130
	3&4-Methylphenol	100	79.2	79	30-130
88-75-5	2-Nitrophenol	50	51.1	102	30-130
100-02-7	4-Nitrophenol	50	22.4	45	30-130
87-86-5	Pentachlorophenol	50	44.1	88	30-130
108-95-2	Phenol	50	21.4	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.8	102	30-130
88-06-2	2,4,6-Trichlorophenol	50	49.1	98	30-130
62-53-3	Aniline	50	30.6	61	40-140
101-55-3	4-Bromophenyl phenyl ether	50	44.4	89	40-140
85-68-7	Butyl benzyl phthalate	50	47.5	95	40-140
100-51-6	Benzyl Alcohol	50	34.5	69	40-140
91-58-7	2-Chloronaphthaleue	50	41.9	84	40-140
106-47-8	4-Chloroaniline	50	37.7	75	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	41.5	83	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.1	84	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	49.1	98	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.2	86	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.5	83	40-140
121-14-2	2,4-Dinitrotoluene	50	46.3	93	40-140
606-20-2	2,6-Dinitrotoluene	50	42.1	84	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.5	91	40-140
132-64-9	Dibenzofuran	50	39.9	80	40-140
84-74-2	Di-n-butyl phthalate	50	43.2	86	40-140
117-84-0	Di-n-octyl phthalate	50	48.8	98	40-140
84-66-2	Diethyl phthalate	50	40.0	80	40-140
131-11-3	Dimethyl phthalate	50	30.5	61	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.7	97	40-140
118-74-1	Hexachlorobenzene	50	45.5	91	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.2	44	40-140
67-72-1	Hexachloroethane	50	30.4	61	40-140
78-59-1	Isophorone	50	41.7	83	40-140
88-74-4	2-Nitroaniline	50	43.1	86	40-140
99-09-2	3-Nitroaniline	50	41.9	84	40-140
100-01-6	4-Nitroaniline	50	43.7	87	40-140
98-95-3	Nitrobenzene	50	42.2	84	40-140
62-75-9	n-Nitrosodimethylamine	50	27.2	54	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	44.6	89	40-140
86-30-6	N-Nitrosodiphenylamine	50	42.0	84	40-140
110-86-1	Pyridine	50	21.9	44	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	37%	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	82%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-BS	I87171.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.5	79	40-140
208-96-8	Acenaphthylene	50	33.7	67	40-140
120-12-7	Anthracene	50	38.1	76	40-140
56-55-3	Benzo(a)anthracene	50	44.3	89	40-140
50-32-8	Benzo(a)pyrene	50	42.1	84	40-140
205-99-2	Benzo(b)fluoranthene	50	45.2	90	40-140
191-24-2	Benzo(g,h,i)perylene	50	47.6	95	40-140
207-08-9	Benzo(k)fluoranthene	50	43.1	86	40-140
218-01-9	Chrysene	50	42.3	85	40-140
53-70-3	Dibenzo(a,h)anthracene	50	48.6	97	40-140
206-44-0	Fluoranthene	50	42.3	85	40-140
86-73-7	Fluorene	50	39.2	78	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.4	97	40-140
90-12-0	1-Methylnaphthalene	50	35.3	71	40-140
91-57-6	2-Methylnaphthalene	50	34.5	69	40-140
85-01-8	Pheuanthrene	50	37.9	76	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	4.1	7* [a]	33.7	63	157* [b]	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	46.0	84	45.3	85	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	50.8	92	53.5	101	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	49.8	91	52.1	98	5	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	49.4	90	51.7	97	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	44.0	80	55.9	105	24* [b]	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	53.5	97	60.4	114	12	30-130/20
95-48-7	2-Methylphenol	ND		54.9	45.5	83	47.7	90	5	30-130/20
	3&4-Methylphenol	ND		110	90.6	82	96.6	91	6	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	49.1	89	50.9	96	4	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	27.3	50	32.7	61	18	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	47.4	86	53.8	101	13	30-130/20
108-95-2	Phenol	ND		54.9	26.3	48	29.9	56	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.8	87	55.0	103	14	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	45.1	82	54.1	102	18	30-130/20
62-53-3	Aniline	ND		54.9	30.4	55	29.6	56	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.9	45.9	84	51.2	96	11	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.9	50.7	92	55.4	104	9	40-140/20
100-51-6	Benzyl Alcohol	ND		54.9	36.7	67	36.4	68	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.9	39.7	72	45.2	85	13	40-140/20
106-47-8	4-Chloroaniline	ND		54.9	38.3	70	39.6	74	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.9	44.1	80	46.1	87	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.9	44.5	81	46.3	87	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.9	50.6	92	51.7	97	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.9	38.8	71	46.6	88	18	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.9	44.1	80	50.7	95	14	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.9	45.5	83	53.1	100	15	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.9	42.6	78	49.4	93	15	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.9	26.2	48	8.7	16* [a]	100* [b]	40-140/20
132-64-9	Dibenzofuran	1.9	J	54.9	39.7	69	46.5	84	16	40-140/20
84-74-2	Di-n-butyl phthalate	ND		54.9	45.5	83	50.2	94	10	40-140/20
117-84-0	Di-n-octyl pbthalate	ND		54.9	50.7	92	55.0	103	8	40-140/20
84-66-2	Diethyl phthalate	ND		54.9	43.0	78	51.6	97	18	40-140/20
131-11-3	Dimethyl phthalate	ND		54.9	44.5	81	53.2	100	18	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		54.9	51.2	93	56.7	107	10	40-140/20
118-74-1	Hexachlorobenzene	ND		54.9	45.2	82	51.5	97	13	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		54.9	17.4	32* [a]	20.7	39* [a]	17	40-140/20
67-72-1	Hexachloroethane	ND		54.9	26.6	48	27.0	51	1	40-140/20
78-59-1	Isophorone	ND		54.9	43.5	79	45.6	86	5	40-140/20
88-74-4	2-Nitroaniline	ND		54.9	42.2	77	50.6	95	18	40-140/20
99-09-2	3-Nitroaniline	ND		54.9	38.4	70	34.5	65	11	40-140/20
100-01-6	4-Nitroaniline	ND		54.9	41.9	76	39.0	73	7	40-140/20
98-95-3	Nitrobenzene	ND		54.9	47.8	87	49.5	93	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		54.9	30.0	55	29.1	55	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		54.9	45.8	83	49.5	93	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		54.9	45.0	82	50.3	95	11	40-140/20
110-86-1	Pyridine	ND		54.9	22.9	42	21.1	40	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
367-12-4	2-Fluorophenol	51%	50%	47%	15-110%
4165-62-2	Phenol-d5	41%	49%	36%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	95%	78%	15-110%
4165-60-0	Nitrobenzene-d5	81%	88%	84%	30-130%
321-60-8	2-Fluorobiphenyl	61%	77%	75%	30-130%
1718-51-0	Terphenyl-d14	80%	92%	85%	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 non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-MS1	I87172.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
OP36697-MSD1	I87173.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
MC27977-1	I87174.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27954-1, MC27954-2, MC27954-3

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.99		54.9	39.8	71	44.0	81	10	40-140/20
208-96-8	Acenaphthylene	0.32		54.9	33.7	61	36.7	68	9	40-140/20
120-12-7	Anthracene	ND		54.9	39.5	72	42.9	81	8	40-140/20
56-55-3	Benzo(a)anthracene	0.039	J	54.9	45.5	83	49.7	93	9	40-140/20
50-32-8	Benzo(a)pyrene	0.044	J	54.9	43.9	80	47.5	89	8	40-140/20
205-99-2	Benzo(b)fluoranthene	0.048	J	54.9	46.2	84	50.1	94	8	40-140/20
191-24-2	Benzo(g,h,i)perylene	0.052	J	54.9	49.7	90	54.4	102	9	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.9	45.5	83	50.4	95	10	40-140/20
218-01-9	Chrysene	0.047	J	54.9	43.4	79	47.2	89	8	40-140/20
53-70-3	Dibenzo(a,h)anthracene	0.035	J	54.9	50.8	92	55.1	104	8	40-140/20
206-44-0	Fluoranthene	0.065	J	54.9	44.2	80	47.8	90	8	40-140/20
86-73-7	Fluorene	1.6		54.9	37.7	66	42.6	77	12	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	J	54.9	50.5	92	54.9	103	8	40-140/20
90-12-0	1-Methylnaphthalene	70.1		54.9	92.4	41	96.9	50	5	40-140/20
91-57-6	2-Methylnaphthalene	28.4		54.9	58.2	54	61.8	63	6	40-140/20
85-01-8	Phenanthrene	0.77		54.9	40.4	72	44.1	81	9	40-140/20
129-00-0	Pyrene	0.099	J	54.9	42.6	77	46.6	87	9	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
4165-60-0	Nitrobenzene-d5	78%	83%	82%	30-130%
321-60-8	2-Fluorobiphenyl	61%	72%	70%	30-130%
1718-51-0	Terphenyl-d14	77%	89%	83%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3241-CC3238	Injection Date:	01/31/14
Lab File ID:	I87167.D	Injection Time:	13:32
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	356808	4.43	790051	5.49	435059	7.04	712559	8.47	447531	11.24	1187349	12.75
Upper Limit [a]	713616	4.93	1580102	5.99	870118	7.54	1425118	8.97	895062	11.74	2374698	13.25
Lower Limit [b]	178404	3.93	395026	4.99	217530	6.54	356280	7.97	223766	10.74	593675	12.25

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
OP36718-MB	377168	4.43	837965	5.49	456328	7.04	748463	8.47	466759	11.24	1209576	12.75
OP36718-BS	368854	4.43	832332	5.49	449530	7.04	730568	8.47	442146	11.24	1109923	12.75
OP36697-MB	324903	4.43	715893	5.49	389791	7.04	642953	8.46	398521	11.23	1067989	12.74
OP36697-BS	335337	4.43	747618	5.49	401367	7.04	657805	8.47	399809	11.24	1038031	12.75
OP36697-MS1	329145	4.43	721677	5.49	395394	7.04	647671	8.47	398682	11.24	1045379	12.75
OP36697-MSD1	313939	4.43	692443	5.49	371805	7.04	621156	8.47	387178	11.24	1016795	12.75
MC27977-1	315106	4.43	680023	5.49	366746	7.04	598566	8.47	373570	11.24	970506	12.74
ZZZZZZ	305999	4.43	672537	5.49	361458	7.04	595860	8.46	373112	11.23	990332	12.74
ZZZZZZ	328971	4.43	699688	5.49	385694	7.04	616809	8.47	371655	11.24	985353	12.74
ZZZZZZ	316469	4.43	689031	5.49	387486	7.04	606699	8.46	365093	11.24	972044	12.74
ZZZZZZ	324416	4.43	712700	5.49	381294	7.04	625278	8.47	387642	11.24	1004647	12.75
ZZZZZZ	326338	4.43	716807	5.48	386892	7.03	632526	8.46	398665	11.23	1026956	12.74
MC27954-1	380829	4.43	830606	5.49	454209	7.04	739264	8.46	447648	11.24	1185554	12.74
MC27954-2	347650	4.43	764646	5.49	412251	7.04	662332	8.46	403669	11.24	1053237	12.74
MC27954-3	330757	4.43	726295	5.49	387837	7.04	634589	8.47	395144	11.24	1017578	12.75
OP36718-MS	395036	4.43	873352	5.49	471007	7.04	757849	8.47	443401	11.24	1101795	12.75
OP36718-MSD	384000	4.43	857998	5.49	462947	7.04	749679	8.47	440917	11.24	1081813	12.75
MC27986-7	406577	4.43	895027	5.49	488794	7.04	782430	8.47	452977	11.24	1104078	12.75
ZZZZZZ	410472	4.43	893805	5.49	474906	7.04	757109	8.47	446084	11.24	1069977	12.75
ZZZZZZ	414891	4.43	906236	5.49	482868	7.04	777234	8.47	455531	11.24	1102219	12.75
ZZZZZZ	408106	4.43	895166	5.49	477795	7.04	775709	8.47	457116	11.24	1133539	12.75
ZZZZZZ	422012	4.43	919748	5.49	492865	7.04	791178	8.47	442528	11.24	1073061	12.75
ZZZZZZ	411121	4.43	895810	5.49	481832	7.04	776329	8.47	460745	11.24	1126800	12.75
ZZZZZZ	406711	4.43	896042	5.49	475289	7.04	774775	8.47	447988	11.24	1089645	12.75
ZZZZZZ	414775	4.43	919998	5.49	494883	7.04	793790	8.47	460785	11.24	1085543	12.75
ZZZZZZ	415394	4.43	916947	5.49	494580	7.04	801904	8.47	482972	11.24	1141153	12.75

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.

Semivolatile Internal Standard Area Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3241-CC3238	Injection Date:	01/31/14
Lab File ID:	I87167.D	Injection Time:	13:32
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

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

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW769-CC768	Injection Date:	01/31/14
Lab File ID:	W17504.D	Injection Time:	14:03
Instrument ID:	GCMSW	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	127972	4.43	485501	5.50	334388	7.04	591866	8.34	597548	11.03	565363	12.80
Upper Limit [a]	255944	4.93	971002	6.00	668776	7.54	1183732	8.84	1195096	11.53	1130726	13.30
Lower Limit [b]	63986	3.93	242751	5.00	167194	6.54	295933	7.84	298774	10.53	282682	12.30
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	99524	4.43	380576	5.50	256672	7.04	451897	8.33	473715	11.02	450981	12.79
OP36696-MB	122189	4.43	468126	5.50	314512	7.04	534810	8.34	557696	11.02	507871	12.79
OP36696-BS	120938	4.43	452433	5.50	309501	7.04	547614	8.34	556140	11.03	512591	12.79
OP36696-MS1	116668	4.43	434416	5.50	310319	7.04	506919	8.34	524219	11.03	495638	12.80
OP36696-MSD1	107431	4.43	407960	5.50	268557	7.04	462763	8.34	478038	11.03	452505	12.80
MC27977-1	105019	4.43	397827	5.50	269803	7.04	460242	8.34	479909	11.03	453703	12.79
ZZZZZZ	113960	4.43	423479	5.50	284797	7.04	489764	8.34	494820	11.02	465494	12.79
ZZZZZZ	118138	4.43	453493	5.50	290057	7.04	488959	8.34	490112	11.03	458896	12.80
MC27954-1	138491	4.43	518874	5.50	342103	7.04	571821	8.34	590476	11.02	548644	12.79
MC27954-2	128565	4.43	482434	5.50	318222	7.04	524619	8.34	524673	11.02	492702	12.79
MC27954-3	127617	4.43	475544	5.50	304916	7.04	503618	8.34	496909	11.03	468850	12.80
ZZZZZZ	115279	4.43	444808	5.50	299639	7.04	513205	8.34	522614	11.02	477473	12.79
ZZZZZZ	117456	4.43	441651	5.50	290607	7.04	487510	8.33	464333	11.02	430642	12.79
ZZZZZZ	116556	4.43	453160	5.50	302217	7.04	527013	8.33	541412	11.02	512409	12.79
ZZZZZZ	133300	4.43	499647	5.50	333145	7.04	569029	8.33	581304	11.02	547796	12.79
ZZZZZZ	183163	4.43	682316	5.50	441310	7.04	733255	8.33	698534	11.02	639754	12.79
ZZZZZZ	152850	4.43	544393	5.50	354327	7.04	571235	8.34	598677	11.02	581314	12.79

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 Surrogate Recovery Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27954-1	W17515.D	24.0	20.0	58.0	41.0	33.0	58.0
MC27954-2	W17516.D	44.0	33.0	87.0	75.0	53.0	88.0
MC27954-3	W17517.D	47.0	35.0	88.0	69.0	53.0	82.0
OP36696-BS	W17507.D	54.0	37.0	94.0	86.0	82.0	92.0
OP36696-MB	W17506.D	48.0	33.0	88.0	78.0	76.0	89.0
OP36696-MS1	W17508.D	51.0	41.0	82.0	81.0	61.0	80.0
OP36696-MSD1	W17509.D	50.0	49.0	95.0	88.0	77.0	92.0

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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27954-1	I87180.D	45.0	32.0	57.0
MC27954-2	I87181.D	78.0	50.0	82.0
MC27954-3	I87182.D	71.0	51.0	77.0
OP36697-BS	I87171.D	86.0	77.0	89.0
OP36697-MB	I87170.D	78.0	70.0	85.0
OP36697-MS1	I87172.D	78.0	61.0	77.0
OP36697-MSD1	I87173.D	83.0	72.0	89.0

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

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: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-MB	BK34385.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27954-1, MC27954-2, MC27954-3, MC27954-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	92%	36-173%
460-00-4	Bromofluorobenzene (S)	79%	36-173%

Blank Spike Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-BS	BK34386.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27954-1, MC27954-2, MC27954-3, MC27954-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.062	87	60-140
106-93-4	1,2-Dibromoethane	0.071	0.067	94	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	82%	36-173%
460-00-4	Bromofluorobenzene (S)	73%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-MS	BK34387.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
OP36715-MSD	BK34388.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
MC27977-1	BK34389.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27954-1, MC27954-2, MC27954-3, MC27954-5

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0686	0.069	101	0.058	87	17	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0686	0.065	95	0.065	97	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
460-00-4	Bromofluorobenzene (S)	84%	86%	73%	36-173%
460-00-4	Bromofluorobenzene (S)	87%	76%	78%	36-173%

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27954-1	BK34410.D	86.0	84.0
MC27954-2	BK34411.D	86.0	81.0
MC27954-3	BK34412.D	86.0	37.0
MC27954-5	BK34413.D	80.0	63.0
OP36715-BS	BK34386.D	82.0	73.0
OP36715-MB	BK34385.D	92.0	79.0
OP36715-MS	BK34387.D	84.0	87.0
OP36715-MSD	BK34388.D	86.0	76.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1134-ICC1134	Injection Date:	01/31/14
Lab File ID:	BK34380.D	Injection Time:	09:07
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34383A.D	01/31/14	10:15	4.39	4.45
OP36715-MB	BK34385.D	01/31/14	11:01	4.39	4.45
OP36715-BS	BK34386.D	01/31/14	11:23	4.39	4.45
OP36715-MS	BK34387.D	01/31/14	11:46	4.39	4.45
OP36715-MSD	BK34388.D	01/31/14	12:09	4.39	4.45
MC27977-1	BK34389.D	01/31/14	12:32	4.39	4.45
ZZZZZZ	BK34390.D	01/31/14	12:55	4.38	4.46
ZZZZZZ	BK34391.D	01/31/14	13:18	4.40	4.47
ZZZZZZ	BK34392.D	01/31/14	13:41	4.39	4.46
ZZZZZZ	BK34393.D	01/31/14	14:12	4.39	4.45
ZZZZZZ	BK34394.D	01/31/14	14:35	4.39	4.45

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

8.5.1

8

GC Surrogate Retention Time Summary

Job Number: MC27954
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1134-CC1134	Injection Date:	01/31/14
Lab File ID:	BK34406.D	Injection Time:	19:10
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34407.D	01/31/14	19:33	4.39	4.45
ZZZZZZ	BK34408.D	01/31/14	19:57	4.39	4.45
ZZZZZZ	BK34409.D	01/31/14	20:20	4.39	4.45
MC27954-1	BK34410.D	01/31/14	20:43	4.39	4.45
MC27954-2	BK34411.D	01/31/14	21:06	4.39	4.45
MC27954-3	BK34412.D	01/31/14	21:28	4.39	4.45
MC27954-5	BK34413.D	01/31/14	21:51	4.39	4.45
GBK1134-ECC113	BK34414.D	01/31/14	22:14	4.39	4.45

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

Roxana Groundwater Quarterly – 1st Quarter 2014 Data Review

Laboratory SDG: MC27977

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/28/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P66-ROX-012914	MW14-ROX-012914-EB
MW14-ROX-012914	P93A-ROX-012914
MW13-ROX-012914	TB-ROX-012914-HCL
TB-ROX-012914-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the PAH compound phenanthrene was detected in the method blank; phenanthrene and 1-methylnaphthalene were detected in the equipment blank. VOC LCS/LCSD recoveries were outside evaluation criteria. VOC and SVOC MS/MSD recoveries were outside evaluation criteria in sample P66-ROX-012914. Sample P93A-ROX-012914 was diluted due to high levels of benzene. These issues are addressed further in the appropriate sections below. Additionally, the initial calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D). The continuing calibration verification for 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 0.1ºC and 0.6ºC, 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
MW14-ROX-012914-EB	PAHs	1-Methylnaphthalene	0.085 µg/L
MW14-ROX-012914-EB	PAHs	Phenanthrene	0.022 µg/L
OP36697-MB	PAHs	Phenanthrene	0.023 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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW13-ROX-012914	PAHs	1-Methylnaphthalene	-	**U**

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
MSV1041-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**504/222**	**78**	70-130/25
MSV1041-BS/BSD	VOCs	2,2-Dichloropropane	**132**/129	3	70-130/25
MSV1042-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**288/426**	**39**	70-130/25
MSV1042-BS/BSD	VOCs	2,2-Dichloropropane	**132**/127	3	70-130/25

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, sample P66-ROX-012914 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
P66-ROX-012914	VOCs	Acrylonitrile	**135/132**	2	70-130/30
P66-ROX-012914	VOCs	2-Chloroethyl vinyl ether	**17/16**	10	70-130/30
P66-ROX-012914	VOCs	Isopropylbenzene	**64/64**	0	70-130/30
P66-ROX-012914	VOCs	Methyl tert butyl ether	**222/220**	1	70-130/30
P66-ROX-012914	VOCs	n-Propylbenzene	**52/52**	0	70-130/30
P66-ROX-012914	VOCs	Vinyl acetate	**184/187**	1	70-130/30
P66-ROX-012914	SVOCs	Benzoic acid	**7**/63	**157**	30-130/20
P66-ROX-012914	SVOCs	2,4-Dinitrophenol	80/105	**24**	30-130/20
P66-ROX-012914	SVOCs	3,3'-Dichlorobenzidine	48/**16**	**100**	40-140/20
P66-ROX-012914	SVOCs	Hexachlorocyclopentadiene	**32/39**	17	40-140/20

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria with the exception of compounds 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

New England ACCUTEST LABORATORIES

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC27977

Sampling Date: 01/29/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **99**

NELAP ACCREDITED ACCUTEST LABORATORY

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 4/28/2014

Reza Tand
Lab Director

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: MC27977

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC27977-1	01/29/14	09:50	LRKH	01/30/14	AQ	Ground Water	P66-ROX-012914
MC27977-1D	01/29/14	09:50	LRKH	01/30/14	AQ	Water Dup/MSD	P66-ROX-012914
MC27977-1S	01/29/14	09:50	LRKH	01/30/14	AQ	Water Matrix Spike	P66-ROX-012914
MC27977-2	01/29/14	10:20	LRKH	01/30/14	AQ	Equipment Blank	MW14-ROX-012914-EB
MC27977-3	01/29/14	10:55	LRKH	01/30/14	AQ	Ground Water	MW14-ROX-012914
MC27977-4	01/29/14	13:05	LRKH	01/30/14	AQ	Ground Water	P93A-ROX-012914
MC27977-5	01/29/14	15:30	LRKH	01/30/14	AQ	Ground Water	MW13-ROX-012914
MC27977-6	01/29/14	00:00	LRKH	01/30/14	AQ	Trip Blank Water	TB-ROX-012914-HCL
MC27977-7	01/29/14	00:00	LRKH	01/30/14	AQ	Trip Blank Water	TB-ROX-012914-ST

ACCUTEST LABORATORIES

N

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	Job No	MC27977
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Centra	Report Date	2/12/2014 1:26:16 PM

5 Sample(s) and 2 Trip Blank(s) were collected on 01/29/2014 and were received at Accutest on 01/30/2014 properly preserved, at 0.1 Deg. C and intact. These Samples received an Accutest job number of MC27977. 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:** MSV1041

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- MSV1041-BS Recovery(s) for 2,2-Dichloropropane are outside control limits. Blank Spike meets program technical requirements.
- MC27977-1MS/MSD Reeovery(s) for Isopropylbenzene, n-Propylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MC27977-1MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Acrylonitrile, Methyl Tert Butyl Ether, Vinyl Acetate are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MSV1041-BS/BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- RPD of MSV1041-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- Continuing calibration standard MSV1041-CC1019 for 2-chloroethyl vinyl ether exc eed 40% Difference (response biased high). Associated samples are non-detect for these compound

Matrix: AQ **Batch ID:** MSV1042

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28049-3MS, MC28049-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Continuing calibration standard MSV1042-CC1019 for 2-chloroethyl vinyl ether exc eed 40% Difference (response biased high). Associated samples are non-detect for these compound
- MSV1042-BS Recovery(s) for 2,2-Dichloropropane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2,2-Dichloropropane, 2-Chloroethyl vinyl ether, Dichlorodifluoromethane, Methyl Tert Butyl Ether 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-Chloroethyl vinyl ether are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD of MSV1042-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- MSV1042-BS/BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ	Batch ID: OP36696

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene, 3,3'-Dichlorobenzidine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD(s) for MSD for 2,4-Dinitrophenol, 3,3'-Dichlorobenzidine, Benzoic Acid are outside control limits for sample OP36696-MSD1. High RPD due to possible matrix interference and/or sample non-homogeneity.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ	Batch ID: OP36697

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD were used as the QC samples indicated.
- MC27977-2, 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: OP36715

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27977-1MS, MC27977-1MSD 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(MC27977).

Summary of Hits

Job Number: MC27977
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/29/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27977-1	P66-ROX-012914					
Benzene		8.0	0.50	0.45	ug/l	SW846 8260C
n-Butylbenzene		16.0	5.0	0.54	ug/l	SW846 8260C
sec-Butylbenzene		20.5	5.0	0.58	ug/l	SW846 8260C
tert-Butylbenzene		5.3	5.0	0.87	ug/l	SW846 8260C
Ethylbenzene		1.3	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		131	5.0	0.64	ug/l	SW846 8260C
n-Propylbenzene		157	5.0	0.59	ug/l	SW846 8260C
Toluene		1.7	1.0	0.46	ug/l	SW846 8260C
o-Xylene		4.5	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		4.5	1.0	0.41	ug/l	SW846 8260C
Dibenzofuran		1.9 J	2.1	0.17	ug/l	SW846 8270D
Acenaphthene		0.99	0.11	0.073	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.32	0.11	0.053	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.039 J	0.053	0.021	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.044 J	0.11	0.031	ug/l	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.048 J	0.053	0.034	ug/l	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.052 J	0.11	0.029	ug/l	SW846 8270D BY SIM
Chrysene		0.047 J	0.11	0.025	ug/l	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.035 J	0.11	0.034	ug/l	SW846 8270D BY SIM
Fluoranthene		0.065 J	0.11	0.043	ug/l	SW846 8270D BY SIM
Fluorene		1.6	0.11	0.11	ug/l	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.041 J	0.11	0.033	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		70.1	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		28.4	0.21	0.079	ug/l	SW846 8270D BY SIM
Phenanthrene		0.77	0.053	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.099 J	0.11	0.041	ug/l	SW846 8270D BY SIM
MC27977-2	MW14-ROX-012914-EB					
1-Methylnaphthalene		0.085 J	0.22	0.054	ug/l	SW846 8270D BY SIM
Phenanthrene		0.022 JB	0.054	0.014	ug/l	SW846 8270D BY SIM
MC27977-3	MW14-ROX-012914					
sec-Butylbenzene		1.3 J	5.0	0.58	ug/l	SW846 8260C
Isopropylbenzene		3.6 J	5.0	0.64	ug/l	SW846 8260C
n-Propylbenzene		2.0 J	5.0	0.59	ug/l	SW846 8260C
Di-n-butyl phthalate		0.45 J	5.4	0.42	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.56 J	2.2	0.53	ug/l	SW846 8270D
Acenaphthene		0.62	0.11	0.074	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.12	0.11	0.053	ug/l	SW846 8270D BY SIM
Fluorene		0.41	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		7.5	0.22	0.054	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC27977
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/29/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC27977-4	P93A-ROX-012914					
Benzene		136000	250	230	ug/l	SW846 8260C
Phenol		105	5.4	0.56	ug/l	SW846 8270D
Acenaphthene		0.22	0.11	0.075	ug/l	SW846 8270D BY SIM
Fluorene		0.32	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		13.3	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		7.2	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		0.22 B	0.054	0.014	ug/l	SW846 8270D BY SIM
MC27977-5	MW13-ROX-012914					
Methyl Tert Butyl Ether		8.0	1.0	0.43	ug/l	SW846 8260C
1-Methylnaphthalene		0.096 J	0.22	0.055	ug/l	SW846 8270D BY SIM
MC27977-6	TB-ROX-012914-HCL					
No hits reported in this sample.						
MC27977-7	TB-ROX-012914-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P66-ROX-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27616.D	1	02/04/14	AMY	n/a	n/a	MSV1041
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	8.0	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	16.0	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	20.5	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	5.3	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	1.3	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	131	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	157	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	1.7	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	4.5	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	4.5	1.0	0.41	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Iudicates value exceeds calibration range
J = Indicates 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-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	106%		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	

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-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidiue	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	1.9	2.1	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	47%		15-110%
4165-62-2	Phenol-d5	36%		15-110%
118-79-6	2,4,6-Tribromophenol	78%		15-110%
4165-60-0	Nitrobenzene-d5	84%		30-130%
321-60-8	2-Fluorobiphenyl	75%		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 = Reportiug Limit
E = Indicates value exceeds calibration range
J = Indicates 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-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87174.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241
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	0.99	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	0.32	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	0.11	0.098	ng/l	
56-55-3	Benzo(a)anthracene	0.039	0.053	0.021	ug/l	J
50-32-8	Benzo(a)pyrene	0.044	0.11	0.031	ug/l	J
205-99-2	Benzo(b)fluoranthene	0.048	0.053	0.034	ug/l	J
191-24-2	Benzo(g,h,i)perylene	0.052	0.11	0.029	ug/l	J
207-08-9	Benzo(k)fluoranthene	ND	0.11	0.041	ug/l	
218-01-9	Chrysene	0.047	0.11	0.025	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	0.035	0.11	0.034	ug/l	J
206-44-0	Fluoranthene	0.065	0.11	0.043	ug/l	J
86-73-7	Fluorene	1.6	0.11	0.11	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	0.11	0.033	ng/l	J
90-12-0	1-Methylnaphthalene	70.1	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	28.4	0.21	0.079	ug/l	
85-01-8	Phenanthrene	0.77	0.053	0.013	ug/l	
129-00-0	Pyrene	0.099	0.11	0.041	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	70%		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 estiuated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P66-ROX-012914		
Lab Sample ID:	MC27977-1	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenne, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34389.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	73%		36-173%
460-00-4	Bromofluorobenzene (S)	78%		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:	MW14-ROX-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27612.D	1	02/04/14	AMY	n/a	n/a	MSV1041
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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 fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

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

Report of Analysis

Client Sample ID:	MW14-ROX-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	99%		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	

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-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17511.D	1	01/31/14	KR	01/30/14	OP36696	MSW769
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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 fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	33%		15-110%
4165-62-2	Phenol-d5	24%		15-110%
118-79-6	2,4,6-Tribromophenol	73%		15-110%
4165-60-0	Nitrobenzene-d5	56%		30-130%
321-60-8	2-Fluorobiphenyl	54%		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 rauge
J = Indicates 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-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87175.D	1	01/31/14	KR	01/30/14	OP36697	MS13241
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	0.085	0.22	0.054	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.022	0.054	0.014	ug/l	JB
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	58%		30-130%
321-60-8	2-Fluorobiphenyl	51%		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:	MW14-ROX-012914-EB		
Lab Sample ID:	MC27977-2	Date Sampled:	01/29/14
Matrix:	AQ - Equipment Blank	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34393.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		36-173%
460-00-4	Bromofluorobenzene (S)	87%		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:	MW14-ROX-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27617.D	1	02/04/14	AMY	n/a	n/a	MSV1041
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	1.3	5.0	0.58	ug/l	J
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	3.6	5.0	0.64	ug/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	2.0	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	MW14-ROX-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	100%		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	

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-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17512.D	1	01/31/14	KR	01/30/14	OP36696	MSW769
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Diuitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	0.45	5.4	0.42	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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RL = Reporting Liuit
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B = Indicates analyte found in associated method hlauk
N = Iudicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW14-ROX-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.56	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	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	39%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	88%		15-110%
4165-60-0	Nitrobenzene-d5	72%		30-130%
321-60-8	2-Fluorohiphenyl	73%		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	

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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:	MW14-ROX-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87176.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241
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	0.62	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	0.12	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	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	7.5	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.22	0.080	ug/l	
85-01-8	Phenanthrene	ND	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	77%		30-130%
321-60-8	2-Fluorobiphenyl	67%		30-130%
1718-51-0	Terphenyl-d14	90%		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-012914		
Lab Sample ID:	MC27977-3	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34394.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
Run #2							

	Initial Volume	Final Volume
Run #1	35.2 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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	91%		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

Report of Analysis

Client Sample ID:	P93A-ROX-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27647.D	500	02/05/14	AMY	n/a	n/a	MSV1042
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	5000	1400	ug/l	
107-02-8	Acrolein	ND	13000	3100	ug/l	
107-13-1	Acrylonitrile	ND	2500	1800	ug/l	
71-43-2	Benzene	136000	250	230	ug/l	
108-86-1	Bromobenzene	ND	2500	220	ug/l	
74-97-5	Bromochloromethane	ND	2500	320	ug/l	
75-27-4	Bromodichloromethane	ND	500	170	ug/l	
75-25-2	Bromoform	ND	500	210	ug/l	
74-83-9	Bromomethaue	ND	1000	760	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	800	ug/l	
104-51-8	n-Butylbenzene	ND	2500	270	ug/l	
135-98-8	sec-Butylbenzene	ND	2500	290	ug/l	
98-06-6	tert-Butylbenzene	ND	2500	440	ug/l	
75-15-0	Carbon disulfide	ND	2500	300	ug/l	
56-23-5	Carbon tetrachloride	ND	500	310	ug/l	
108-90-7	Chlorobenzene	ND	500	240	ug/l	
75-00-3	Chloroethane	ND	1000	420	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	2500	630	ug/l	
67-66-3	Chloroform	ND	500	250	ug/l	
74-87-3	Chloromethane	ND	1000	720	ug/l	
95-49-8	o-Chlorotoluene	ND	2500	270	ug/l	
106-43-4	p-Chlorotoluene	ND	2500	240	ug/l	
124-48-1	Dibromochloromethane	ND	500	160	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	170	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	150	ug/l	
106-46-7	1,4-Dichlorohenzene	ND	500	130	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	600	ug/l	
75-34-3	1,1-Dichloroethane	ND	500	190	ug/l	
107-06-2	1,2-Dichloroethane	ND	500	180	ug/l	
75-35-4	1,1-Dichloroethene	ND	500	330	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	500	270	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	500	270	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-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	230	ug/l	
142-28-9	1,3-Dichloropropane	ND	2500	480	ug/l	
594-20-7	2,2-Dichloropropane	ND	2500	630	ug/l	
563-58-6	1,1-Dichloropropene	ND	2500	320	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	250	110	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	250	140	ug/l	
123-91-1	1,4-Dioxane	ND	13000	7800	ug/l	
97-63-2	Ethyl methacrylate	ND	2500	400	ug/l	
100-41-4	Ethylbenzene	ND	500	190	ug/l	
87-68-3	Hexachlorobutadiene	ND	2500	630	ug/l	
591-78-6	2-Hexanone	ND	2500	1100	ug/l	
98-82-8	Isopropylbenzene	ND	2500	320	ug/l	
99-87-6	p-Isopropyltoluene	ND	2500	270	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	220	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	640	ug/l	
74-95-3	Methylene bromide	ND	2500	210	ug/l	
75-09-2	Methylene chloride	ND	1000	200	ug/l	
91-20-3	Naphthalene	ND	2500	390	ug/l	
103-65-1	n-Propylbenzene	ND	2500	290	ug/l	
100-42-5	Styrene	ND	2500	240	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	500	230	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	210	ug/l	
127-18-4	Tetrachloroethene	ND	500	310	ug/l	
108-88-3	Toluene	ND	500	230	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2500	380	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2500	230	ug/l	
71-55-6	1,1,1-Trichloroetbane	ND	500	470	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	250	ug/l	
79-01-6	Trichloroethene	ND	500	220	ug/l	
75-69-4	Trichlorofluoromethane	ND	500	310	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2500	350	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2500	230	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2500	540	ug/l	
108-05-4	Vinyl Acetate	ND	2500	660	ug/l	
75-01-4	Vinyl chloride	ND	500	300	ug/l	
	m,p-Xylene	ND	500	350	ug/l	
95-47-6	o-Xylene	ND	500	200	ug/l	
1330-20-7	Xylene (total)	ND	500	200	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-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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:	P93A-ROX-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17513.D	1	01/31/14	KR	01/30/14	OP36696	MSW769
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	105	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	P93A-ROX-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	37%		15-110%
4165-62-2	Phenol-d5	30%		15-110%
118-79-6	2,4,6-Tribromophenol	86%		15-110%
4165-60-0	Nitrobenzene-d5	82%		30-130%
321-60-8	2-Fluorobiphenyl	76%		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
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:	P93A-ROX-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87177.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241
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	0.32	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	13.3	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	7.2	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.22	0.054	0.014	ug/l	B
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	69%		30-130%
1718-51-0	Terphenyl-d14	92%		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:	P93A-ROX-012914		
Lab Sample ID:	MC27977-4	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34396.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	93%		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:	MW13-ROX-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27618.D	1	02/04/14	AMY	n/a	n/a	MSV1041
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ng/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxaue	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	8.0	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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 blauk
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW13-ROX-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		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	

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-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17514.D	1	01/31/14	KR	01/30/14	OP36696	MSW769
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.5	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.54	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.55	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.64	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.5	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.63	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.35	ug/l	
62-53-3	Aniline	ND	11	0.70	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.5	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.5	0.94	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.63	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.5	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.5	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.5	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.5	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.5	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.5	0.72	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.74	ug/l	
606-20-2	2,6-Dinitrotolueue	ND	11	0.71	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.5	0.55	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.5	0.43	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.5	0.48	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-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.55	ug/l	
131-11-3	Dimethyl phthalate	ND	5.5	0.55	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.54	ug/l	
118-74-1	Hexachlorobenzene	ND	5.5	0.33	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.5	0.48	ug/l	
78-59-1	Isophorone	ND	5.5	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.31	ug/l	
99-09-2	3-Nitroauiline	ND	11	0.55	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.8	ug/l	
98-95-3	Nitrobenzene	ND	5.5	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.5	0.55	ug/l	
621-64-7	N-Nitroso-di-u-propylamine	ND	5.5	0.89	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.5	0.59	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	39%		15-110%
4165-62-2	Phenol-d5	34%		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	76%		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:	MW13-ROX-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87178.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241
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	ND	0.11	0.076	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	0.055	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	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	~~0.096~~ IA	0.22	0.055	ug/l	J IA
91-57-6	2-Methylnaphthalene	ND	0.22	0.082	ug/l	
85-01-8	Phenanthrene	ND	0.055	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	80%		30-130%
321-60-8	2-Fluorobiphenyl	69%		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:	MW13-ROX-012914		
Lab Sample ID:	MC27977-5	Date Sampled:	01/29/14
Matrix:	AQ - Ground Water	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34397.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	94%		36-173%
460-00-4	Bromofluorobenzene (S)	71%		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-012914-HCL		
Lab Sample ID:	MC27977-6	Date Sampled:	01/29/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27611.D	1	02/04/14	AMY	n/a	n/a	MSVI041
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobeuzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-012914-HCL		
Lab Sample ID:	MC27977-6	Date Sampled:	01/29/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-012914-HCL		
Lab Sample ID:	MC27977-6	Date Sampled:	01/29/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/30/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	98%		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	

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-012914-ST		
Lab Sample ID:	MC27977-7	Date Sampled:	01/29/14
Matrix:	AQ - Trip Blank Water	Date Received:	01/30/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34398.D	1	01/31/14	NK	01/30/14	OP36715	GBK1I34
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	79%		36-173%
460-00-4	Bromofluorobenzene (S)	67%		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

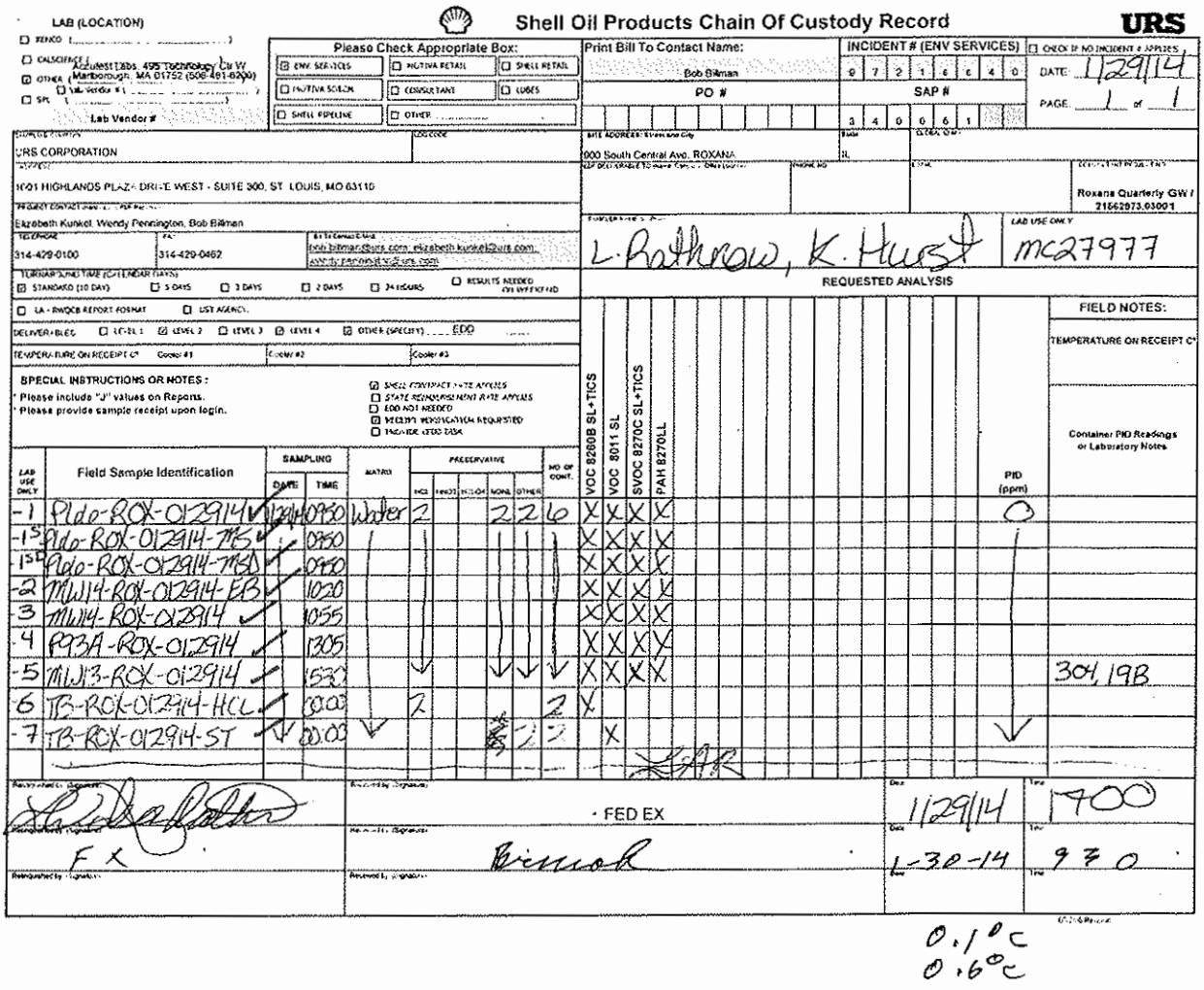
Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ RENCO ( )
☐ CALSCIENCE ( )
☑ OTHER (Accutest Labs, 495 Technology Ctr 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 SOLON ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman
PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 1/29/14
PAGE: 1 of 1

URS CORPORATION

1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

Elizabeth Kunkel, Wendy Pennington, Bob Billman

314-429-0100 | 314-429-0462 | bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com

900 South Central Ave, ROXANA | IL

Roxana Quarterly GW / 21562973.03001

L. Rathrow, K. Hurst

LAB USE ONLY: MC27977

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 REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ TRIGGER EDD DISK

REQUESTED ANALYSIS

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	Pldo-ROX-012914	1/29/14	0950	Water	2			2	2	6	X	X	X	X	0	
-1S	Pldo-ROX-012914-MS		0950								X	X	X	X		
-1SD	Pldo-ROX-012914-MSD		0950								X	X	X	X		
-2	MW14-ROX-012914-EB		1020								X	X	X	X		
-3	MW14-ROX-012914		1055								X	X	X	X		
-4	P93A-ROX-012914		1305								X	X	X	X		
-5	MW13-ROX-012914		1530								X	X	X	X		304, 19B
-6	TB-ROX-012914-HCL		00:00		2					2	X					
-7	TB-ROX-012914-ST		00:00							2		X				

LAR

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/29/14	1700
FX	[signature]	1-30-14	930

0.1°C
0.6°C

MC27977: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC27977 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/30/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 2 **Airbill #'s:**

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

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

Quality Control 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

5

MC27977: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27977

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27977-1 Collected: 29-JAN-14 09:50 By: LRKH Received: 30-JAN-14 By: P66-ROX-012914						
MC27977-1	SW846 8011	31-JAN-14 12:32	NK	30-JAN-14	AJ	V8011SL
MC27977-1	SW846 8270D BY SIM	31-JAN-14 16:15	KR	30-JAN-14	TA	B8270SIMSL
MC27977-1	SW846 8270D	31-JAN-14 16:28	KR	30-JAN-14	TA	AB8270SL+
MC27977-1	SW846 8260C	04-FEB-14 16:04	AMY			V8260SL+
MC27977-2 Collected: 29-JAN-14 10:20 By: LRKH Received: 30-JAN-14 By: MW14-ROX-012914-EB						
MC27977-2	SW846 8011	31-JAN-14 14:12	NK	30-JAN-14	AJ	V8011SL
MC27977-2	SW846 8270D BY SIM	31-JAN-14 16:38	KR	30-JAN-14	TA	B8270SIMSL
MC27977-2	SW846 8270D	31-JAN-14 16:52	KR	30-JAN-14	TA	AB8270SL+
MC27977-2	SW846 8260C	04-FEB-14 12:23	AMY			V8260SL+
MC27977-3 Collected: 29-JAN-14 10:55 By: LRKH Received: 30-JAN-14 By: MW14-ROX-012914						
MC27977-3	SW846 8011	31-JAN-14 14:35	NK	30-JAN-14	AJ	V8011SL
MC27977-3	SW846 8270D BY SIM	31-JAN-14 17:00	KR	30-JAN-14	TA	B8270SIMSL
MC27977-3	SW846 8270D	31-JAN-14 17:16	KR	30-JAN-14	TA	AB8270SL+
MC27977-3	SW846 8260C	04-FEB-14 16:31	AMY			V8260SL+
MC27977-4 Collected: 29-JAN-14 13:05 By: LRKH Received: 30-JAN-14 By: P93A-ROX-012914						
MC27977-4	SW846 8011	31-JAN-14 15:21	NK	30-JAN-14	AJ	V8011SL
MC27977-4	SW846 8270D BY SIM	31-JAN-14 17:23	KR	30-JAN-14	TA	B8270SIMSL
MC27977-4	SW846 8270D	31-JAN-14 17:40	KR	30-JAN-14	TA	AB8270SL+
MC27977-4	SW846 8260C	05-FEB-14 13:47	AMY			V8260SL+
MC27977-5 Collected: 29-JAN-14 15:30 By: LRKH Received: 30-JAN-14 By: MW13-ROX-012914						
MC27977-5	SW846 8011	31-JAN-14 15:44	NK	30-JAN-14	AJ	V8011SL
MC27977-5	SW846 8270D BY SIM	31-JAN-14 17:46	KR	30-JAN-14	TA	B8270SIMSL
MC27977-5	SW846 8270D	31-JAN-14 18:04	KR	30-JAN-14	TA	AB8270SL+
MC27977-5	SW846 8260C	04-FEB-14 16:58	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC27977

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC27977-6 Collected: 29-JAN-14 00:00 By: LRKH Received: 30-JAN-14 By: TB-ROX-012914-HCL						
MC27977-6	SW846 8260C	04-FEB-14 11:56	AMY			V8260SL+
MC27977-7 Collected: 29-JAN-14 00:00 By: LRKH Received: 30-JAN-14 By: TB-ROX-012914-ST						
MC27977-7	SW846 8011	31-JAN-14 16:07	NK	30-JAN-14	AJ	V8011SL

Accutest Internal Chain of Custody

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/30/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27977-1.1	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-1.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-1.5	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-1.7	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-1.7	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-1.7	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-1.7	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-1.8	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-1.8	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-1.8	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-1.8	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-1.9	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-1.9	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-1.9	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-1.9	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-1.10	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-1.10	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-1.10	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-1.10	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Retnrn to Storage
MC27977-1.11	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27977-1.11	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27977-1.11	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27977-1.11	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27977-1.14	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-1.16	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-1.17	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-2.1	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-2.3	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-2.3	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-2.3	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-2.3	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/30/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27977-2.5	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-3.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-3.3	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-3.3	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-3.3	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-3.3	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-3.4	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27977-3.4	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27977-3.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27977-3.4	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27977-3.5	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-4.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-4.3	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27977-4.3	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27977-4.3	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27977-4.3	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27977-4.4	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-4.4	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-4.4	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-4.4	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-4.4	VOC Ref #3	Amy Min Yang	02/05/14 10:36	Retrieve from Storage
MC27977-4.4	Amy Min Yang	GCMSV	02/05/14 10:37	Load on Instrument
MC27977-4.4	GCMSV	Amy Min Yang	02/07/14 17:08	Unload from Instrument
MC27977-4.4	Amy Min Yang	VOC Ref #3	02/07/14 17:08	Return to Storage
MC27977-4.6	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-5.2	Walk In Ref #22	Thomas Abruzzise	01/30/14 14:22	Retrieve from Storage
MC27977-5.3	VOC Ref #3	Amy Min Yang	01/31/14 14:25	Retrieve from Storage
MC27977-5.3	Amy Min Yang	GCMSP	01/31/14 14:25	Load on Instrument
MC27977-5.3	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC27977-5.3	Krysten Dufort	VOC Ref #3	02/03/14 10:00	Return to Storage
MC27977-5.4	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-5.4	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-5.4	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument

Accutest Internal Chain of Custody

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/30/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC27977-5.4	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-5.6	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage
MC27977-6.1	VOC Ref #3	Amy Min Yang	02/04/14 11:19	Retrieve from Storage
MC27977-6.1	Amy Min Yang	GCMSV	02/04/14 11:19	Load on Instrument
MC27977-6.1	GCMSV	Amy Min Yang	02/05/14 10:17	Unload from Instrument
MC27977-6.1	Amy Min Yang	VOC Ref #3	02/05/14 10:17	Return to Storage
MC27977-7.2	VOC Ref #3	Marc Tahtamoni	01/30/14 14:15	Retrieve from Storage

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: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-MB	V27610.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ng/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-MB	V27610.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-MB	V27610.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	103%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotolueue	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-peutauoue (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-MB	V27641.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	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/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-BS	V27607.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MSV1041-BSD	V27608.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	41.9	84	42.3	85	1	70-130/25
107-02-8	Acrolein	50	59.3	119	56.6	113	5	70-130/25
107-13-1	Acrylonitrile	100	89.4	89	85.9	86	4	70-130/25
71-43-2	Benzene	50	55.4	111	54.2	108	2	70-130/25
108-86-1	Bromobenzene	50	50.4	101	50.7	101	1	70-130/25
74-97-5	Bromochloromethane	50	55.5	111	54.3	109	2	70-130/25
75-27-4	Bromodichloromethane	50	56.4	113	55.6	111	1	70-130/25
75-25-2	Bromoform	50	41.6	83	40.7	81	2	70-130/25
74-83-9	Bromomethane	50	50.8	102	50.9	102	0	70-130/25
78-93-3	2-Butanone (MEK)	50	44.1	88	43.1	86	2	70-130/25
104-51-8	n-Butylbenzene	50	54.2	108	53.3	107	2	70-130/25
135-98-8	sec-Butylbenzene	50	54.8	110	54.5	109	1	70-130/25
98-06-6	tert-Butylbenzene	50	53.4	107	52.4	105	2	70-130/25
75-15-0	Carbon disulfide	50	50.5	101	48.1	96	5	70-130/25
56-23-5	Carbon tetrachloride	50	55.0	110	53.7	107	2	70-130/25
108-90-7	Chlorobenzene	50	44.8	90	44.5	89	1	70-130/25
75-00-3	Chloroethane	50	61.7	123	60.6	121	2	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	252	504* [a]	111	222* [a]	78* [a]	70-130/25
67-66-3	Chloroform	50	52.6	105	51.6	103	2	70-130/25
74-87-3	Chloromethane	50	49.1	98	49.8	100	1	70-130/25
95-49-8	o-Chlorotoluene	50	49.9	100	49.6	99	1	70-130/25
106-43-4	p-Chlorotoluene	50	50.8	102	50.4	101	1	70-130/25
124-48-1	Dibromochloromethane	50	53.7	107	53.0	106	1	70-130/25
95-50-1	1,2-Dichlorobenzene	50	47.3	95	46.1	92	3	70-130/25
541-73-1	1,3-Dichlorohenzene	50	47.9	96	47.5	95	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	47.6	95	46.9	94	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	54.8	110	55.8	112	2	70-130/25
75-34-3	1,1-Dichloroethane	50	55.0	110	54.3	109	1	70-130/25
107-06-2	1,2-Dichloroethane	50	51.3	103	50.7	101	1	70-130/25
75-35-4	1,1-Dichloroethene	50	54.6	109	53.8	108	1	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	56.3	113	56.0	112	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	55.4	111	54.4	109	2	70-130/25
78-87-5	1,2-Dichloropropane	50	52.8	106	52.2	104	1	70-130/25
142-28-9	1,3-Dichloropropane	50	49.4	99	48.8	98	1	70-130/25
594-20-7	2,2-Dichloropropane	50	66.2	132* [b]	64.4	129	3	70-130/25
563-58-6	1,1-Dichloropropene	50	53.2	106	52.7	105	1	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-BS	V27607.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MSV1041-BSD	V27608.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

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	50.7	101	49.6	99	2	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	51.7	103	50.7	101	2	70-130/25
123-91-1	1,4-Dioxane	250	229	92	231	92	1	70-130/25
97-63-2	Ethyl methacrylate	50	50.2	100	49.4	99	2	77-137/25
100-41-4	Ethylbenzene	50	51.6	103	51.2	102	1	70-130/25
87-68-3	Hexachlorohutadiene	50	52.6	105	54.3	109	3	70-130/25
591-78-6	2-Hexanone	50	40.3	81	39.0	78	3	70-130/25
98-82-8	Isopropylbenzene	50	56.2	112	55.4	111	1	70-130/25
99-87-6	p-Isopropyltoluene	50	53.2	106	52.7	105	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	61.9	124	58.9	118	5	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	56.4	113	53.5	107	5	70-130/25
74-95-3	Methylene bromide	50	52.5	105	51.3	103	2	70-130/25
75-09-2	Methylene chloride	50	51.9	104	51.3	103	1	70-130/25
91-20-3	Naphthalene	50	53.4	107	52.5	105	2	70-130/25
103-65-1	n-Propylbenzene	50	53.3	107	52.6	105	1	70-130/25
100-42-5	Styrene	50	47.9	96	47.2	94	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	50.6	101	49.9	100	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	49.9	100	48.6	97	3	70-130/25
127-18-4	Tetrachloroethene	50	51.2	102	50.5	101	1	70-130/25
108-88-3	Toluene	50	58.0	116	56.7	113	2	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	58.2	116	57.2	114	2	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	58.7	117	58.1	116	1	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.5	117	57.1	114	2	70-130/25
79-00-5	1,1,2-Trichloroethane	50	53.5	107	52.9	106	1	70-130/25
79-01-6	Trichloroethene	50	55.3	111	53.7	107	3	70-130/25
75-69-4	Trichlorofluoromethane	50	57.3	115	56.2	112	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	48.6	97	47.8	96	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	54.6	109	53.6	107	2	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	55.8	112	54.4	109	3	70-130/25
108-05-4	Vinyl Acetate	50	54.7	109	53.8	108	2	70-130/25
75-01-4	Vinyl chloride	50	49.5	99	49.4	99	0	70-130/25
	m,p-Xylene	100	87.0	87	85.9	86	1	70-130/25
95-47-6	o-Xylene	50	44.2	88	43.8	88	1	70-130/25
1330-20-7	Xylene (total)	150	131	87	130	87	1	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1041-BS	V27607.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MSV1041-BSD	V27608.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	97%	70-130%
2037-26-5	Toluene-D8	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	98%	99%	70-130%

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

6.2.1

6

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	45.5	91	42.0	84	8	70-130/25
107-02-8	Acrolein	50	61.5	123	61.5	123	0	70-130/25
107-13-1	Acrylonitrile	100	88.2	88	89.9	90	2	70-130/25
71-43-2	Benzene	50	54.1	108	53.9	108	0	70-130/25
108-86-1	Bromobenzene	50	49.3	99	49.6	99	1	70-130/25
74-97-5	Bromochloromethane	50	55.1	110	54.6	109	1	70-130/25
75-27-4	Bromodichloromethane	50	56.1	112	55.5	111	1	70-130/25
75-25-2	Bromoform	50	42.6	85	42.0	84	1	70-130/25
74-83-9	Bromomethane	50	50.5	101	50.2	100	1	70-130/25
78-93-3	2-Butanone (MEK)	50	45.9	92	44.5	89	3	70-130/25
104-51-8	n-Butylbenzene	50	53.1	106	52.4	105	1	70-130/25
135-98-8	sec-Butylbenzene	50	54.2	108	54.1	108	0	70-130/25
98-06-6	tert-Butylbenzene	50	52.6	105	51.6	103	2	70-130/25
75-15-0	Carbon disulfide	50	47.8	96	48.5	97	1	70-130/25
56-23-5	Carbon tetrachloride	50	55.9	112	54.7	109	2	70-130/25
108-90-7	Chlorobenzene	50	44.3	89	44.0	88	1	70-130/25
75-00-3	Chloroethane	50	60.6	121	60.0	120	1	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	144	288* [a]	213	426* [a]	39* [a]	70-130/25
67-66-3	Chloroform	50	51.8	104	52.1	104	1	70-130/25
74-87-3	Chloromethane	50	55.2	110	50.5	101	9	70-130/25
95-49-8	o-Chlorotoluene	50	48.6	97	48.4	97	0	70-130/25
106-43-4	p-Chlorotoluene	50	49.7	99	49.3	99	1	70-130/25
124-48-1	Dibromochloromethane	50	53.6	107	53.4	107	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	45.9	92	45.9	92	0	70-130/25
541-73-1	1,3-Dichlorobenzene	50	46.6	93	46.1	92	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	46.3	93	45.9	92	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	54.3	109	54.9	110	1	70-130/25
75-34-3	1,1-Dichloroethane	50	54.3	109	54.2	108	0	70-130/25
107-06-2	1,2-Dichloroethane	50	51.5	103	51.1	102	1	70-130/25
75-35-4	1,1-Dichloroethene	50	54.3	109	54.8	110	1	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	55.3	111	55.8	112	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.0	108	54.1	108	0	70-130/25
78-87-5	1,2-Dichloropropane	50	52.0	104	51.8	104	0	70-130/25
142-28-9	1,3-Dichloropropane	50	48.7	97	48.4	97	1	70-130/25
594-20-7	2,2-Dichloropropane	50	65.9	132* [b]	63.7	127	3	70-130/25
563-58-6	1,1-Dichloropropene	50	53.4	107	52.5	105	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

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	50.0	100	49.7	99	1	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	52.0	104	51.3	103	1	70-130/25
123-91-1	1,4-Dioxane	250	234	94	234	94	0	70-130/25
97-63-2	Ethyl methacrylate	50	49.5	99	49.1	98	1	77-137/25
100-41-4	Ethylbenzene	50	50.8	102	50.1	100	1	70-130/25
87-68-3	Hexachlorobutadiene	50	54.3	109	53.5	107	1	70-130/25
591-78-6	2-Hexanone	50	41.6	83	39.5	79	5	70-130/25
98-82-8	Isopropylbenzene	50	55.0	110	55.0	110	0	70-130/25
99-87-6	p-Isopropyltoluene	50	52.8	106	51.8	104	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	58.6	117	58.9	118	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	55.4	111	55.1	110	1	70-130/25
74-95-3	Methylene bromide	50	52.5	105	51.9	104	1	70-130/25
75-09-2	Methylene chloride	50	51.0	102	51.7	103	1	70-130/25
91-20-3	Naphthalene	50	50.7	101	52.3	105	3	70-130/25
103-65-1	n-Propylbenzene	50	52.7	105	52.0	104	1	70-130/25
100-42-5	Styrene	50	46.2	92	46.5	93	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	50.0	100	49.4	99	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.7	97	48.6	97	0	70-130/25
127-18-4	Tetrachloroethene	50	50.5	101	49.5	99	2	70-130/25
108-88-3	Toluene	50	57.2	114	56.3	113	2	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	55.3	111	56.9	114	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	56.3	113	57.4	115	2	70-130/25
71-55-6	1,1,1-Trichloroethane	50	58.4	117	57.7	115	1	70-130/25
79-00-5	1,1,2-Trichloroethane	50	52.9	106	52.6	105	1	70-130/25
79-01-6	Trichloroethene	50	54.6	109	54.0	108	1	70-130/25
75-69-4	Trichlorofluoromethane	50	58.0	116	56.7	113	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	50.7	101	50.5	101	0	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	53.5	107	53.0	106	1	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	54.1	108	53.5	107	1	70-130/25
108-05-4	Vinyl Acetate	50	54.1	108	54.5	109	1	70-130/25
75-01-4	Vinyl chloride	50	48.5	97	49.0	98	1	70-130/25
	m,p-Xylene	100	86.1	86	84.4	84	2	70-130/25
95-47-6	o-Xylene	50	43.2	86	43.1	86	0	70-130/25
1330-20-7	Xylene (total)	150	129	86	127	85	2	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1042-BS	V27638.D	1	02/05/14	AMY	n/a	n/a	MSV1042
MSV1042-BSD	V27639.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	98%	70-130%
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	100%	70-130%

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

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27977-1MS	V27623.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1MSD	V27624.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1	V27616.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	46.2	92	46.0	92	0	70-130/30
107-02-8	Acrolein	ND		50	59.3	119	54.9	110	8	70-130/30
107-13-1	Acrylonitrile	ND		100	135	135* a	132	132* a	2	70-130/30
71-43-2	Benzene	8.0		50	60.1	104	59.9	104	0	70-130/30
108-86-1	Bromobenzene	ND		50	47.8	96	48.4	97	1	70-130/30
74-97-5	Bromochloromethane	ND		50	53.8	108	54.1	108	1	70-130/30
75-27-4	Bromodichloromethane	ND		50	55.2	110	54.6	109	1	70-130/30
75-25-2	Bromoform	ND		50	38.1	76	39.2	78	3	70-130/30
74-83-9	Bromomethane	ND		50	51.4	103	50.7	101	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		50	37.1	74	38.7	77	4	70-130/30
104-51-8	n-Butylbenzene	16.0		50	68.7	105	68.8	106	0	70-130/30
135-98-8	sec-Butylbenzene	20.5		50	71.6	102	72.2	103	1	70-130/30
98-06-6	tert-Butylbenzene	5.3		50	56.1	102	56.4	102	1	70-130/30
75-15-0	Carbon disulfide	ND		50	50.8	102	49.4	99	3	70-130/30
56-23-5	Carbon tetrachloride	ND		50	53.6	107	52.3	105	2	70-130/30
108-90-7	Chlorobenzene	ND		50	43.3	87	43.8	88	1	70-130/30
75-00-3	Chloroethane	ND		50	64.0	128	62.8	126	2	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50	8.7	17* a	7.9	16* a	10	70-130/30
67-66-3	Chloroform	ND		50	51.1	102	51.1	102	0	70-130/30
74-87-3	Chloromethane	ND		50	63.1	126	61.5	123	3	70-130/30
95-49-8	o-Chlorotoluene	ND		50	48.4	97	48.4	97	0	70-130/30
106-43-4	p-Chlorotoluene	ND		50	48.9	98	49.0	98	0	70-130/30
124-48-1	Dibromochloromethane	ND		50	50.4	101	51.1	102	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		50	46.0	92	47.1	94	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		50	46.1	92	46.4	93	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50	45.6	91	46.0	92	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND		50	60.1	120	56.7	113	6	70-130/30
75-34-3	1,1-Dichloroethane	ND		50	54.4	109	54.5	109	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		50	48.1	96	48.0	96	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		50	58.0	116	56.9	114	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50	55.7	111	56.1	112	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50	55.9	112	55.7	111	0	70-130/30
78-87-5	1,2-Dichloropropane	ND		50	59.4	119	59.1	118	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50	46.5	93	47.2	94	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50	58.1	116	59.0	118	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		50	52.4	105	51.6	103	2	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27977-1MS	V27623.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1MSD	V27624.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1	V27616.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50	48.2	96	48.5	97	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50	49.7	99	50.0	100	1	70-130/30
123-91-1	1,4-Dioxane	ND		250	231	92	230	92	0	70-130/30
97-63-2	Ethyl methacrylate	ND		50	56.7	113	57.1	114	1	72-139/30
100-41-4	Ethylbenzene	1.3		50	51.0	99	51.1	100	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		50	58.3	117	60.3	121	3	70-130/30
591-78-6	2-Hexanone	ND		50	44.2	88	43.1	86	3	70-130/30
98-82-8	Isopropylbenzene	131		50	163	64* b	163	64* b	0	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	51.8	104	51.8	104	0	70-130/30
1634-04-4	Methyl Tert Bntyl Ether	ND		50	111	222* a	110	220* a	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	60.7	121	62.0	124	2	70-130/30
74-95-3	Methylene bromide	ND		50	52.3	105	51.9	104	1	70-130/30
75-09-2	Methylene chloride	ND		50	53.6	107	53.9	108	1	70-130/30
91-20-3	Naphthalene	ND		50	57.0	114	65.2	130	13	70-130/30
103-65-1	n-Propylbenzene	157		50	183	52* b	183	52* b	0	70-130/30
100-42-5	Styrene	ND		50	45.6	91	46.1	92	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	47.9	96	48.8	98	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	47.6	95	49.1	98	3	70-130/30
127-18-4	Tetrachloroethene	ND		50	50.0	100	49.5	99	1	70-130/30
108-88-3	Toluene	1.7		50	58.6	114	58.4	113	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	55.6	111	62.2	124	11	70-130/30
120-82-1	1,2,4-Trichlorobenzeue	ND		50	60.0	120	64.0	128	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	56.0	112	55.7	111	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50	53.7	107	54.1	108	1	70-130/30
79-01-6	Trichloroethene	ND		50	54.1	108	53.9	108	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		50	60.7	121	56.3	113	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50	49.0	98	50.3	101	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	52.6	105	52.7	105	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	53.6	107	53.8	108	0	70-130/30
108-05-4	Vinyl Acetate	ND		50	92.0	184* a	93.3	187* a	1	70-130/30
75-01-4	Vinyl chloride	ND		50	52.5	105	51.6	103	2	70-130/30
	m,p-Xylene	ND		100	84.5	85	84.4	84	0	70-130/30
95-47-6	o-Xylene	4.5		50	43.5	78	43.6	78	0	70-130/30
1330-20-7	Xylene (total)	4.5		150	128	82	128	82	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC27977-1MS	V27623.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1MSD	V27624.D	1	02/04/14	AMY	n/a	n/a	MSV1041
MC27977-1	V27616.D	1	02/04/14	AMY	n/a	n/a	MSV1041

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

MC27977-1, MC27977-2, MC27977-3, MC27977-5, MC27977-6

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
1868-53-7	Dibromofluoromethane	96%	97%	95%	70-130%
2037-26-5	Toluene-D8	104%	103%	106%	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.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Compound	MC28049-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	185	74	185	74	0	70-130/30
107-02-8	Acrolein	ND		250	262	105	260	104	1	70-130/30
107-13-1	Acrylonitrile	ND		500	491	98	478	96	3	70-130/30
71-43-2	Benzene	ND		250	298	119	283	113	5	70-130/30
108-86-1	Bromobenzene	ND		250	273	109	257	103	6	70-130/30
74-97-5	Bromochloromethane	ND		250	298	119	293	117	2	70-130/30
75-27-4	Bromodichloromethane	ND		250	305	122	291	116	5	70-130/30
75-25-2	Bromoform	ND		250	225	90	221	88	2	70-130/30
74-83-9	Bromomethane	ND		250	270	108	254	102	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	209	84	210	84	0	70-130/30
104-51-8	n-Butylbenzene	ND		250	290	116	278	111	4	70-130/30
135-98-8	sec-Butylbenzene	ND		250	297	119	283	113	5	70-130/30
98-06-6	tert-Butylbenzene	ND		250	286	114	272	109	5	70-130/30
75-15-0	Carbon disulfide	ND		250	270	108	260	104	4	70-130/30
56-23-5	Carbon tetrachloride	ND		250	311	124	297	119	5	70-130/30
108-90-7	Chlorobenzene	ND		250	245	98	233	93	5	70-130/30
75-00-3	Chloroethane	ND		250	321	128	305	122	5	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	287	115	275	110	4	70-130/30
74-87-3	Chloromethane	ND		250	293	117	272	109	7	70-130/30
95-49-8	o-Chlorotoluene	ND		250	268	107	251	100	7	70-130/30
106-43-4	p-Chlorotoluene	ND		250	271	108	258	103	5	70-130/30
124-48-1	Dibromochloromethane	ND		250	293	117	280	112	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	249	100	238	95	5	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	253	101	239	96	6	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	251	100	240	96	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	337	135* [a]	317	127	6	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	305	122	291	116	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	286	114	274	110	4	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	314	126	300	120	5	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	305	122	295	118	3	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	301	120	287	115	5	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	287	115	273	109	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	268	107	256	102	5	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	339	136* [a]	335	134* [a]	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	300	120	283	113	6	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Compound	MC28049-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	264	106	253	101	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	281	112	271	108	4	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1250	100	1310	105	5	70-130/30
97-63-2	Ethyl methacrylate	ND		250	269	108	260	104	3	72-139/30
100-41-4	Ethylbenzene	ND		250	283	113	268	107	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	289	116	283	113	2	70-130/30
591-78-6	2-Hexanone	ND		250	201	80	195	78	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	304	122	286	114	6	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	286	114	272	109	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	330	132* [a]	319	128	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	303	121	296	118	2	70-130/30
74-95-3	Methylene bromide	ND		250	288	115	278	111	4	70-130/30
75-09-2	Methylene chloride	ND		250	284	114	271	108	5	70-130/30
91-20-3	Naphthalene	ND		250	281	112	277	111	1	70-130/30
103-65-1	n-Propylbenzene	ND		250	289	116	272	109	6	70-130/30
100-42-5	Styrene	ND		250	259	104	247	99	5	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	275	110	264	106	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	268	107	254	102	5	70-130/30
127-18-4	Tetrachloroethene	ND		250	284	114	269	108	5	70-130/30
108-88-3	Toluene	0.88	J	250	312	124	295	118	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	274	110	293	117	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	298	119	299	120	0	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	317	127	308	123	3	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	291	116	278	111	5	70-130/30
79-01-6	Trichloroethene	ND		250	301	120	285	114	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	311	124	296	118	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	275	110	267	107	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	294	118	276	110	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	295	118	282	113	5	70-130/30
108-05-4	Vinyl Acetate	ND		250	303	121	292	117	4	70-130/30
75-01-4	Vinyl chloride	ND		250	270	108	253	101	7	70-130/30
	m,p-Xylene	ND		500	467	93	446	89	5	70-130/30
95-47-6	o-Xylene	ND		250	236	94	225	90	5	70-130/30
1330-20-7	Xylene (total)	ND		750	703	94	671	89	5	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28049-3MS	V27653.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3MSD	V27654.D	5	02/05/14	AMY	n/a	n/a	MSV1042
MC28049-3	V27648.D	1	02/05/14	AMY	n/a	n/a	MSV1042

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

MC27977-4

CAS No.	Surrogate Recoveries	MS	MSD	MC28049-3	Limits
1868-53-7	Dibromofluoromethane	98%	98%	109%	70-130%
2037-26-5	Toluene-D8	100%	100%	100%	70-130%
460-00-4	4-Bromofluorobenzene	99%	99%	103%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

6.3.2

6

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1041-CC1019	Injection Date:	02/04/14
Lab File ID:	V27607.D	Injection Time:	10:10
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	572790	6.53	744080	7.72	432976	11.06	475835	13.27	213644	3.50
Upper Limit [a]	1145580	7.03	1488160	8.22	865952	11.56	951670	13.77	427288	4.00
Lower Limit [b]	286395	6.03	372040	7.22	216488	10.56	237918	12.77	106822	3.00
Lab Sample ID	1S 1 AREA	RT	1S 2 AREA	RT	1S 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1041-BS	572790	6.53	744080	7.72	432976	11.06	475835	13.27	213644	3.50
MSV1041-BSD	558094	6.54	727770	7.72	421150	11.06	458739	13.27	201356	3.50
MSV1041-MB	468370	6.54	644896	7.72	372621	11.06	373394	13.27	174196	3.50
MC27977-6	467035	6.54	644686	7.72	372397	11.06	370491	13.27	167807	3.50
MC27977-2	476951	6.54	650809	7.72	379014	11.06	378417	13.27	193244	3.51
ZZZZZZ	420714	6.54	581997	7.72	344415	11.06	342728	13.27	162791	3.50
MC27977-1	516738	6.54	684967	7.72	410783	11.06	417832	13.28	193116	3.50
MC27977-3	530903	6.54	671479	7.72	389304	11.06	390490	13.28	201625	3.51
MC27977-5	480082	6.54	656552	7.72	386530	11.06	395740	13.28	174719	3.51
ZZZZZZ	523693	6.54	682809	7.72	389220	11.06	401858	13.27	204258	3.50
ZZZZZZ	488807	6.54	666481	7.72	381833	11.06	401345	13.27	199993	3.50
MC27977-1MS	559136	6.54	747767	7.72	444664	11.06	503156	13.27	220088	3.50
MC27977-1MSD	564077	6.54	762668	7.72	448483	11.06	504878	13.27	213766	3.51
ZZZZZZ	543890	6.54	720433	7.72	415149	11.06	423274	13.27	205840	3.51
ZZZZZZ	498756	6.53	691777	7.72	398647	11.06	406940	13.28	195871	3.50
ZZZZZZ	510249	6.53	696024	7.72	403297	11.06	404988	13.27	206143	3.50
ZZZZZZ	498316	6.53	673739	7.72	391673	11.06	395535	13.27	198008	3.50
ZZZZZZ	485168	6.54	650264	7.72	377039	11.06	382888	13.28	179923	3.51
ZZZZZZ	502474	6.55	660884	7.73	384704	11.07	407839	13.28	181192	3.51

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

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

Volatile Internal Standard Area Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1042-CC1019	Injection Date:	02/05/14
Lab File ID:	V27637.D	Injection Time:	09:23
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	573160	6.57	750824	7.75	448659	11.08	500167	13.29	217245	3.53
Upper Limit [a]	1146320	7.07	1501648	8.25	897318	11.58	1000334	13.79	434490	4.03
Lower Limit [b]	286580	6.07	375412	7.25	224330	10.58	250084	12.79	108623	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
MSV1042-BS	555130	6.56	724931	7.74	424053	11.08	470259	13.29	206420	3.52
MSV1042-BSD	538538	6.57	709202	7.75	414373	11.08	454579	13.29	201515	3.53
MSV1042-MB	449418	6.58	613800	7.76	361859	11.08	359541	13.30	174146	3.54
ZZZZZZ	440684	6.58	602223	7.75	358457	11.09	359022	13.30	164865	3.53
ZZZZZZ	416468	6.59	582738	7.76	345849	11.09	343012	13.30	157790	3.54
ZZZZZZ	407498	6.58	572752	7.76	336878	11.09	336034	13.30	149557	3.53
ZZZZZZ	408385	6.58	567291	7.76	336532	11.09	334838	13.30	151836	3.53
ZZZZZZ	399233	6.59	568956	7.76	331860	11.09	336421	13.30	154265	3.54
MC27977-4	381055	6.59	554311	7.77	326546	11.09	326009	13.30	155274	3.55
MC28049-3	383833	6.60	534444	7.77	323398	11.09	321121	13.30	160164	3.55
ZZZZZZ	378529	6.60	521332	7.77	311450	11.09	314020	13.30	158569	3.55
ZZZZZZ	423697	6.59	543642	7.77	330198	11.09	341592	13.30	191785	3.54
ZZZZZZ	441963	6.59	581854	7.77	354399	11.09	393174	13.30	162866	3.55
ZZZZZZ	446323	6.59	609116	7.76	349025	11.09	371278	13.30	193074	3.54
MC28049-3MS	488825	6.59	636264	7.77	370007	11.09	409649	13.30	190735	3.54
MC28049-3MSD	509603	6.59	668384	7.76	385716	11.09	431833	13.30	201141	3.54
ZZZZZZ	439595	6.59	578937	7.77	341341	11.09	349093	13.30	173891	3.54
ZZZZZZ	439130	6.59	688016	7.76	357658	11.09	366161	13.30	183145	3.53
ZZZZZZ	430828	6.59	583617	7.76	342244	11.09	363034	13.30	174965	3.53
ZZZZZZ	423083	6.59	586275	7.76	340582	11.09	358478	13.30	175920	3.54
ZZZZZZ	429093	6.59	598294	7.77	348217	11.09	361453	13.30	180788	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.

Volatile Surrogate Recovery Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27977-1	V27616.D	95.0	106.0	104.0
MC27977-2	V27612.D	104.0	99.0	104.0
MC27977-3	V27617.D	93.0	100.0	104.0
MC27977-4	V27647.D	110.0	97.0	103.0
MC27977-5	V27618.D	103.0	99.0	105.0
MC27977-6	V27611.D	103.0	98.0	104.0
MC27977-1MS	V27623.D	96.0	104.0	97.0
MC27977-1MSD	V27624.D	97.0	103.0	98.0
MC28049-3MS	V27653.D	98.0	100.0	99.0
MC28049-3MSD	V27654.D	98.0	100.0	99.0
MSV1041-BS	V27607.D	96.0	100.0	98.0
MSV1041-BSD	V27608.D	97.0	100.0	99.0
MSV1041-MB	V27610.D	103.0	98.0	103.0
MSV1042-BS	V27638.D	96.0	100.0	98.0
MSV1042-BSD	V27639.D	98.0	99.0	100.0
MSV1042-MB	V27641.D	104.0	99.0	103.0

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

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: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MB	W17506.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	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	33%	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	76%	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: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-MB	I87170.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

7.1.2

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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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.023	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	78%	30-130%
321-60-8	2-Fluorobiphenyl	70%	30-130%
1718-51-0	Terphenyl-d14	85%	30-130%

Blank Spike Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

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	44.8	90	30-130
59-50-7	4-Chloro-3-methyl phenol	50	48.5	97	30-130
120-83-2	2,4-Dichlorophenol	50	51.3	103	30-130
105-67-9	2,4-Dimethylphenol	50	41.8	84	30-130
51-28-5	2,4-Dinitrophenol	50	50.0	100	30-130
534-52-1	4,6-Dinitro-o-cresol	50	54.1	108	30-130
95-48-7	2-Methylphenol	50	41.6	83	30-130
	3&4-Methylphenol	100	79.2	79	30-130
88-75-5	2-Nitrophenol	50	51.1	102	30-130
100-02-7	4-Nitrophenol	50	22.4	45	30-130
87-86-5	Pentachlorophenol	50	44.1	88	30-130
108-95-2	Phenol	50	21.4	43	30-130
95-95-4	2,4,5-Trichlorophenol	50	50.8	102	30-130
88-06-2	2,4,6-Trichlorophenol	50	49.1	98	30-130
62-53-3	Aniline	50	30.6	61	40-140
101-55-3	4-Bromophenyl phenyl ether	50	44.4	89	40-140
85-68-7	Butyl benzyl phthalate	50	47.5	95	40-140
100-51-6	Benzyl Alcohol	50	34.5	69	40-140
91-58-7	2-Chloronaphthalene	50	41.9	84	40-140
106-47-8	4-Chloroaniline	50	37.7	75	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	41.5	83	40-140
111-44-4	bis(2-Chloroethyl)ether	50	42.1	84	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	49.1	98	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	43.2	86	40-140
122-66-7	1,2-Diphenylhydrazine	50	41.5	83	40-140
121-14-2	2,4-Dinitrotoluene	50	46.3	93	40-140
606-20-2	2,6-Dinitrotoluene	50	42.1	84	40-140
91-94-1	3,3'-Dichlorobenzidine	50	45.5	91	40-140
132-64-9	Dibenzofuran	50	39.9	80	40-140
84-74-2	Di-n-butyl phthalate	50	43.2	86	40-140
117-84-0	Di-n-octyl phthalate	50	48.8	98	40-140
84-66-2	Diethyl phthalate	50	40.0	80	40-140
131-11-3	Dimethyl phthalate	50	30.5	61	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.7	97	40-140
118-74-1	Hexachlorobenzene	50	45.5	91	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-BS	W17507.D	1	01/31/14	KR	01/29/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.2	44	40-140
67-72-1	Hexachloroethane	50	30.4	61	40-140
78-59-1	Isophorone	50	41.7	83	40-140
88-74-4	2-Nitroaniline	50	43.1	86	40-140
99-09-2	3-Nitroaniline	50	41.9	84	40-140
100-01-6	4-Nitroaniline	50	43.7	87	40-140
98-95-3	Nitrobenzene	50	42.2	84	40-140
62-75-9	n-Nitrosodimethylamine	50	27.2	54	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	44.6	89	40-140
86-30-6	N-Nitrosodiphenylamine	50	42.0	84	40-140
110-86-1	Pyridine	50	21.9	44	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	15-110%
4165-62-2	Phenol-d5	37%	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	82%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-BS	I87171.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.5	79	40-140
208-96-8	Acenaphthylene	50	33.7	67	40-140
120-12-7	Anthracene	50	38.1	76	40-140
56-55-3	Benzo(a)anthracene	50	44.3	89	40-140
50-32-8	Benzo(a)pyrene	50	42.1	84	40-140
205-99-2	Benzo(b)fluoranthene	50	45.2	90	40-140
191-24-2	Benzo(g,h,i)perylene	50	47.6	95	40-140
207-08-9	Benzo(k)fluoranthene	50	43.1	86	40-140
218-01-9	Chrysene	50	42.3	85	40-140
53-70-3	Dibenzo(a,h)anthracene	50	48.6	97	40-140
206-44-0	Fluoranthene	50	42.3	85	40-140
86-73-7	Fluorene	50	39.2	78	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.4	97	40-140
90-12-0	1-Methylnaphthalene	50	35.3	71	40-140
91-57-6	2-Methylnaphthalene	50	34.5	69	40-140
85-01-8	Phenanthrene	50	37.9	76	40-140
129-00-0	Pyrene	50	41.5	83	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	89%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		54.9	4.1	7* a	33.7	63	157* b	30-130/20
95-57-8	2-Chlorophenol	ND		54.9	46.0	84	45.3	85	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		54.9	50.8	92	53.5	101	5	30-130/20
120-83-2	2,4-Dichlorophenol	ND		54.9	49.8	91	52.1	98	5	30-130/20
105-67-9	2,4-Dimethylphenol	ND		54.9	49.4	90	51.7	97	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		54.9	44.0	80	55.9	105	24* b	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		54.9	53.5	97	60.4	114	12	30-130/20
95-48-7	2-Methylphenol	ND		54.9	45.5	83	47.7	90	5	30-130/20
	3&4-Methylphenol	ND		110	90.6	82	96.6	91	6	30-130/20
88-75-5	2-Nitrophenol	ND		54.9	49.1	89	50.9	96	4	30-130/20
100-02-7	4-Nitrophenol	ND		54.9	27.3	50	32.7	61	18	30-130/20
87-86-5	Pentachlorophenol	ND		54.9	47.4	86	53.8	101	13	30-130/20
108-95-2	Phenol	ND		54.9	26.3	48	29.9	56	13	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		54.9	47.8	87	55.0	103	14	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		54.9	45.1	82	54.1	102	18	30-130/20
62-53-3	Aniline	ND		54.9	30.4	55	29.6	56	3	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		54.9	45.9	84	51.2	96	11	40-140/20
85-68-7	Butyl benzyl phthalate	ND		54.9	50.7	92	55.4	104	9	40-140/20
100-51-6	Benzyl Alcohol	ND		54.9	36.7	67	36.4	68	1	40-140/20
91-58-7	2-Chloronaphthalene	ND		54.9	39.7	72	45.2	85	13	40-140/20
106-47-8	4-Chloroaniline	ND		54.9	38.3	70	39.6	74	3	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		54.9	44.1	80	46.1	87	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		54.9	44.5	81	46.3	87	4	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		54.9	50.6	92	51.7	97	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		54.9	38.8	71	46.6	88	18	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		54.9	44.1	80	50.7	95	14	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		54.9	45.5	83	53.1	100	15	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		54.9	42.6	78	49.4	93	15	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		54.9	26.2	48	8.7	16* a	100* b	40-140/20
132-64-9	Dibenzofuran	1.9	J	54.9	39.7	69	46.5	84	16	40-140/20
84-74-2	Di-n-butyl phthalate	ND		54.9	45.5	83	50.2	94	10	40-140/20
117-84-0	Di-n-octyl phthalate	ND		54.9	50.7	92	55.0	103	8	40-140/20
84-66-2	Diethyl phthalate	ND		54.9	43.0	78	51.6	97	18	40-140/20
131-11-3	Dimethyl phthalate	ND		54.9	44.5	81	53.2	100	18	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		54.9	51.2	93	56.7	107	10	40-140/20
118-74-1	Hexachlorobenzene	ND		54.9	45.2	82	51.5	97	13	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36696-MS1	W17508.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
OP36696-MSD1	W17509.D	1	01/31/14	KR	01/29/14	OP36696	MSW769
MC27977-1	W17510.D	1	01/31/14	KR	01/30/14	OP36696	MSW769

The QC reported here applies to the following samples: Method: SW846 8270D

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		54.9	17.4	32* a	20.7	39* a	17	40-140/20
67-72-1	Hexachloroethane	ND		54.9	26.6	48	27.0	51	1	40-140/20
78-59-1	Isophorone	ND		54.9	43.5	79	45.6	86	5	40-140/20
88-74-4	2-Nitroaniline	ND		54.9	42.2	77	50.6	95	18	40-140/20
99-09-2	3-Nitroaniline	ND		54.9	38.4	70	34.5	65	11	40-140/20
100-01-6	4-Nitroaniline	ND		54.9	41.9	76	39.0	73	7	40-140/20
98-95-3	Nitrobenzene	ND		54.9	47.8	87	49.5	93	3	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		54.9	30.0	55	29.1	55	3	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		54.9	45.8	83	49.5	93	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		54.9	45.0	82	50.3	95	11	40-140/20
110-86-1	Pyridine	ND		54.9	22.9	42	21.1	40	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
367-12-4	2-Fluorophenol	51%	50%	47%	15-110%
4165-62-2	Phenol-d5	41%	49%	36%	15-110%
118-79-6	2,4,6-Tribromophenol	82%	95%	78%	15-110%
4165-60-0	Nitrobenzene-d5	81%	88%	84%	30-130%
321-60-8	2-Fluorobiphenyl	61%	77%	75%	30-130%
1718-51-0	Terphenyl-d14	80%	92%	85%	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 non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36697-MS1	I87172.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
OP36697-MSD1	I87173.D	1	01/31/14	KR	01/29/14	OP36697	MSI3241
MC27977-1	I87174.D	1	01/31/14	KR	01/30/14	OP36697	MSI3241

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.99		54.9	39.8	71	44.0	81	10	40-140/20
208-96-8	Acenaphthylene	0.32		54.9	33.7	61	36.7	68	9	40-140/20
120-12-7	Anthracene	ND		54.9	39.5	72	42.9	81	8	40-140/20
56-55-3	Benzo(a)anthracene	0.039	J	54.9	45.5	83	49.7	93	9	40-140/20
50-32-8	Benzo(a)pyrene	0.044	J	54.9	43.9	80	47.5	89	8	40-140/20
205-99-2	Benzo(b)fluoranthene	0.048	J	54.9	46.2	84	50.1	94	8	40-140/20
191-24-2	Benzo(g,h,i)perylene	0.052	J	54.9	49.7	90	54.4	102	9	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		54.9	45.5	83	50.4	95	10	40-140/20
218-01-9	Chrysene	0.047	J	54.9	43.4	79	47.2	89	8	40-140/20
53-70-3	Dibenzo(a,h)anthracene	0.035	J	54.9	50.8	92	55.1	104	8	40-140/20
206-44-0	Fluoranthene	0.065	J	54.9	44.2	80	47.8	90	8	40-140/20
86-73-7	Fluorene	1.6		54.9	37.7	66	42.6	77	12	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	0.041	J	54.9	50.5	92	54.9	103	8	40-140/20
90-12-0	1-Methylnaphthalene	70.1		54.9	92.4	41	96.9	50	5	40-140/20
91-57-6	2-Methylnaphthalene	28.4		54.9	58.2	54	61.8	63	6	40-140/20
85-01-8	Phenanthrene	0.77		54.9	40.4	72	44.1	81	9	40-140/20
129-00-0	Pyrene	0.099	J	54.9	42.6	77	46.6	87	9	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
4165-60-0	Nitrobenzene-d5	78%	83%	82%	30-130%
321-60-8	2-Fluorobiphenyl	61%	72%	70%	30-130%
1718-51-0	Terphenyl-d14	77%	89%	83%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3241-CC3238	Injection Date:	01/31/14
Lab File ID:	I87167.D	Injection Time:	13:32
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	356808	4.43	790051	5.49	435059	7.04	712559	8.47	447531	11.24	1187349	12.75
Upper Limit [a]	713616	4.93	1580102	5.99	870118	7.54	1425118	8.97	895062	11.74	2374698	13.25
Lower Limit [b]	178404	3.93	395026	4.99	217530	6.54	356280	7.97	223766	10.74	593675	12.25
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
OP36718-MB	377168	4.43	837965	5.49	456328	7.04	748463	8.47	466759	11.24	1209576	12.75
OP36718-BS	368854	4.43	832332	5.49	449530	7.04	730568	8.47	442146	11.24	1109923	12.75
OP36697-MB	324903	4.43	715893	5.49	389791	7.04	642953	8.46	398521	11.23	1067989	12.74
OP36697-BS	335337	4.43	747618	5.49	401367	7.04	657805	8.47	399809	11.24	1038031	12.75
OP36697-MS1	329145	4.43	721677	5.49	395394	7.04	647671	8.47	398682	11.24	1045379	12.75
OP36697-MSD1	313939	4.43	692443	5.49	371805	7.04	621156	8.47	387178	11.24	1016795	12.75
MC27977-1	315106	4.43	680023	5.49	366746	7.04	598566	8.47	373570	11.24	970506	12.74
MC27977-2	305999	4.43	672537	5.49	361458	7.04	595860	8.46	373112	11.23	990332	12.74
MC27977-3	328971	4.43	699688	5.49	385694	7.04	616809	8.47	371655	11.24	985353	12.74
MC27977-4	316469	4.43	689031	5.49	387486	7.04	606699	8.46	365093	11.24	972044	12.74
MC27977-5	324416	4.43	712700	5.49	381294	7.04	625278	8.47	387642	11.24	1004647	12.75
ZZZZZZ	326338	4.43	716807	5.48	386892	7.03	632526	8.46	398665	11.23	1026956	12.74
ZZZZZZ	380829	4.43	830606	5.49	454209	7.04	739264	8.46	447648	11.24	1185554	12.74
ZZZZZZ	347650	4.43	764646	5.49	412251	7.04	662332	8.46	403669	11.24	1053237	12.74
ZZZZZZ	330757	4.43	726295	5.49	387837	7.04	634589	8.47	395144	11.24	1017578	12.75
OP36718-MS	395036	4.43	873352	5.49	471007	7.04	757849	8.47	443401	11.24	1101795	12.75
OP36718-MSD	384000	4.43	857998	5.49	462947	7.04	749679	8.47	440917	11.24	1081813	12.75
MC27986-7	406577	4.43	895027	5.49	488794	7.04	782430	8.47	452977	11.24	1104078	12.75
ZZZZZZ	410472	4.43	893805	5.49	474906	7.04	757109	8.47	446084	11.24	1069977	12.75
ZZZZZZ	414891	4.43	906236	5.49	482868	7.04	777234	8.47	455531	11.24	1102219	12.75
ZZZZZZ	408106	4.43	895166	5.49	477795	7.04	775709	8.47	457116	11.24	1133539	12.75
ZZZZZZ	422012	4.43	919748	5.49	492865	7.04	791178	8.47	442528	11.24	1073061	12.75
ZZZZZZ	411121	4.43	895810	5.49	481832	7.04	776329	8.47	460745	11.24	1126800	12.75
ZZZZZZ	406711	4.43	896042	5.49	475289	7.04	774775	8.47	447988	11.24	1089645	12.75
ZZZZZZ	414775	4.43	919998	5.49	494883	7.04	793790	8.47	460785	11.24	1085543	12.75
ZZZZZZ	415394	4.43	916947	5.49	494580	7.04	801904	8.47	482972	11.24	1141153	12.75

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.

Semivolatile Internal Standard Area Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3241-CC3238	Injection Date:	01/31/14
Lab File ID:	I87167.D	Injection Time:	13:32
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

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

7.4.1

7

Semivolatile Internal Standard Area Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW769-CC768	Injection Date:	01/31/14
Lab File ID:	W17504.D	Injection Time:	14:03
Instrument ID:	GCMSW	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	127972	4.43	485501	5.50	334388	7.04	591866	8.34	597548	11.03	565363	12.80
Upper Limit [a]	255944	4.93	971002	6.00	668776	7.54	1183732	8.84	1195096	11.53	1130726	13.30
Lower Limit [b]	63986	3.93	242751	5.00	167194	6.54	295933	7.84	298774	10.53	282682	12.30
Lab Sample ID	IS 1 AREA	RT	1S 2 AREA	RT	IS 3 AREA	RT	1S 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	99524	4.43	380576	5.50	256672	7.04	451897	8.33	473715	11.02	450981	12.79
OP36696-MB	122189	4.43	468126	5.50	314512	7.04	534810	8.34	557696	11.02	507871	12.79
OP36696-BS	120938	4.43	452433	5.50	309501	7.04	547614	8.34	556140	11.03	512591	12.79
OP36696-MS1	116668	4.43	434416	5.50	310319	7.04	506919	8.34	524219	11.03	495638	12.80
OP36696-MSD1	107431	4.43	407960	5.50	268557	7.04	462763	8.34	478038	11.03	452505	12.80
MC27977-1	105019	4.43	397827	5.50	269803	7.04	460242	8.34	479909	11.03	453703	12.79
MC27977-2	113960	4.43	423479	5.50	284797	7.04	489764	8.34	494820	11.02	465494	12.79
MC27977-3	117920	4.43	430231	5.50	285216	7.04	481414	8.34	487894	11.03	457188	12.79
MC27977-4	109463	4.43	413642	5.50	283463	7.04	469850	8.34	497598	11.02	462193	12.79
MC27977-5	118138	4.43	453493	5.50	290057	7.04	488959	8.34	490112	11.03	458896	12.80
ZZZZZZ	138491	4.43	518874	5.50	342103	7.04	571821	8.34	590476	11.02	548644	12.79
ZZZZZZ	128565	4.43	482434	5.50	318222	7.04	524619	8.34	524673	11.02	492702	12.79
ZZZZZZ	127617	4.43	475544	5.50	304916	7.04	503618	8.34	496909	11.03	468850	12.80
ZZZZZZ	115279	4.43	444808	5.50	299639	7.04	513205	8.34	522614	11.02	477473	12.79
ZZZZZZ	117456	4.43	441651	5.50	290607	7.04	487510	8.33	464333	11.02	430642	12.79
ZZZZZZ	116556	4.43	453160	5.50	302217	7.04	527013	8.33	541412	11.02	512409	12.79
ZZZZZZ	133300	4.43	499647	5.50	333145	7.04	569029	8.33	581304	11.02	547796	12.79
ZZZZZZ	183163	4.43	682316	5.50	441310	7.04	733255	8.33	698534	11.02	639754	12.79
ZZZZZZ	152850	4.43	544393	5.50	354327	7.04	571235	8.34	598677	11.02	581314	12.79

IS 1 = 1,4-Dichlorobenzene-d4
1S 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
1S 4 = Phenanthrene-d10
1S 5 = Chrysene-d12
1S 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 Surrogate Recovery Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27977-1	W17510.D	47.0	36.0	78.0	84.0	75.0	85.0
MC27977-2	W17511.D	33.0	24.0	73.0	56.0	54.0	95.0
MC27977-3	W17512.D	39.0	33.0	88.0	72.0	73.0	94.0
MC27977-4	W17513.D	37.0	30.0	86.0	82.0	76.0	95.0
MC27977-5	W17514.D	39.0	34.0	89.0	76.0	76.0	92.0
OP36696-BS	W17507.D	54.0	37.0	94.0	86.0	82.0	92.0
OP36696-MB	W17506.D	48.0	33.0	88.0	78.0	76.0	89.0
OP36696-MS1	W17508.D	51.0	41.0	82.0	81.0	61.0	80.0
OP36696-MSD1	W17509.D	50.0	49.0	95.0	88.0	77.0	92.0

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: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC27977-1	I87174.D	82.0	70.0	83.0
MC27977-2	I87175.D	58.0	51.0	87.0
MC27977-3	I87176.D	77.0	67.0	90.0
MC27977-4	I87177.D	83.0	69.0	92.0
MC27977-5	I87178.D	80.0	69.0	88.0
OP36697-BS	I87171.D	86.0	77.0	89.0
OP36697-MB	I87170.D	78.0	70.0	85.0
OP36697-MS1	I87172.D	78.0	61.0	77.0
OP36697-MSD1	I87173.D	83.0	72.0	89.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Sumuaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-MB	BK34385.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5, MC27977-7

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobeuzene (S)	92%	36-173%
460-00-4	Bromofluorobenzene (S)	79%	36-173%

Blank Spike Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-BS	BK34386.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5, MC27977-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.062	87	60-140
106-93-4	1,2-Dibromoetbane	0.071	0.067	94	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	82%	36-173%
460-00-4	Bromofluorobenzene (S)	73%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36715-MS	BK34387.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
OP36715-MSD	BK34388.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134
MC27977-1	BK34389.D	1	01/31/14	NK	01/30/14	OP36715	GBK1134

The QC reported here applies to the following samples: Method: SW846 8011

MC27977-1, MC27977-2, MC27977-3, MC27977-4, MC27977-5, MC27977-7

CAS No.	Compound	MC27977-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.0686	0.069	101	0.058	87	17	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.0686	0.065	95	0.065	97	0	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC27977-1	Limits
460-00-4	Bromofluorobenzene (S)	84%	86%	73%	36-173%
460-00-4	Bromofluorobenzene (S)	87%	76%	78%	36-173%

* = Outside of Control Limits.

8.3.1

Volatile Surrogate Recovery Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC27977-1	BK34389.D	73.0	78.0
MC27977-2	BK34393.D	96.0	87.0
MC27977-3	BK34394.D	91.0	82.0
MC27977-4	BK34396.D	93.0	95.0
MC27977-5	BK34397.D	94.0	71.0
MC27977-7	BK34398.D	79.0	67.0
OP36715-BS	BK34386.D	82.0	73.0
OP36715-MB	BK34385.D	92.0	79.0
OP36715-MS	BK34387.D	84.0	87.0
OP36715-MSD	BK34388.D	86.0	76.0

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	36-173%

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

8.4.1

8

GC Surrogate Retention Time Summary

Job Number: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1134-ICC1134	Injection Date:	01/31/14
Lab File ID:	BK34380.D	Injection Time:	09:07
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34383A.D	01/31/14	10:15	4.39	4.45
OP36715-MB	BK34385.D	01/31/14	11:01	4.39	4.45
OP36715-BS	BK34386.D	01/31/14	11:23	4.39	4.45
OP36715-MS	BK34387.D	01/31/14	11:46	4.39	4.45
OP36715-MSD	BK34388.D	01/31/14	12:09	4.39	4.45
MC27977-1	BK34389.D	01/31/14	12:32	4.39	4.45
ZZZZZZ	BK34390.D	01/31/14	12:55	4.38	4.46
ZZZZZZ	BK34391.D	01/31/14	13:18	4.40	4.47
ZZZZZZ	BK34392.D	01/31/14	13:41	4.39	4.46
MC27977-2	BK34393.D	01/31/14	14:12	4.39	4.45
MC27977-3	BK34394.D	01/31/14	14:35	4.39	4.45

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: MC27977
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1134-CC1134	Injection Date:	01/31/14
Lab File ID:	BK34395.D	Injection Time:	14:58
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.39	4.45

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC27977-4	BK34396.D	01/31/14	15:21	4.39	4.45
MC27977-5	BK34397.D	01/31/14	15:44	4.39	4.45
MC27977-7	BK34398.D	01/31/14	16:07	4.39	4.45
ZZZZZZ	BK34399.D	01/31/14	16:30	4.39	4.45
ZZZZZZ	BK34400.D	01/31/14	16:53	4.39	4.45
ZZZZZZ	BK34401.D	01/31/14	17:16	4.39	4.45
ZZZZZZ	BK34402.D	01/31/14	17:39	4.39	4.45
ZZZZZZ	BK34403.D	01/31/14	18:01	4.39	4.45
ZZZZZZ	BK34404.D	01/31/14	18:24	4.39	4.45
ZZZZZZ	BK34405.D	01/31/14	18:47	4.39	4.45

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC28017

Data Reviewer: Darcy Chase

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW4-ROX-013014	MW7-ROX-013014
MW8-ROX-013014	MW8-ROX-013014-Dup
TB-ROX-013014-HCL	TB-ROX-013014-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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, SVOC, di-n-butyl phthalate and PAH, phenanthrene was detected in the method blank. VOC LCS recovery for chloroethane was outside evaluation criteria. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration standard for 2-chloroethyl vinyl ether exceeded 40 percent difference (%D). Also, the initial calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 30%D.

The cooler receipt form indicated samples were 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. Additionally, the cooler receipt form indicated the sample time of samples MW8-ROX-013014 and MW8-ROX-013014-Dup had been inadvertently left blank on the COC by the field samplers. Upon receipt, the laboratory added the sample time 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?

Yes

Blank ID	Parameter	Analyte	Concentration/ Amount
OP36729-MB	SVOCs	Di-n-butyl phthalate	0.41 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
OP36730-MB	PAHs	Phenanthrene	0.017 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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
MW4-ROX-013014	SVOCs	Di-n-butyl phthalate	-	**U**
MW4-ROX-013014	PAHs	Phenanthrene	-	**U**
MW7-ROX-013014	SVOCs	Di-n-butyl phthalate	-	**U**
MW8-ROX-013014	SVOCs	Di-n-butyl phthalate	-	**U**
MW8-ROX-013014-Dup	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
MSV1046-BS	VOCs	Chloroethane	**136**	70-130

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?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW4-ROX-013014-Run#1	SVOCs	Phenol-d_5	**13**	15-110
MW4-ROX-013014-Run#2	SVOCs	Phenol-d_5	**12**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-013014	SVOCs	Benzoic acid	**UJ**
MW4-ROX-013014	SVOCs	2-Chlorophenol	**UJ**
MW4-ROX-013014	SVOCs	4-Chloro-3-methyl phenol	**UJ**
MW4-ROX-013014	SVOCs	2,4-Dichlorophenol	**UJ**
MW4-ROX-013014	SVOCs	2,4-Dimethylphenol	**UJ**
MW4-ROX-013014	SVOCs	2,4-Dinitrophenol	**UJ**
MW4-ROX-013014	SVOCs	4,6-Dinitro-o-cresol	**UJ**

Sample ID	Parameter	Analyte	Qualification
MW4-ROX-013014	SVOCs	2-Methylphenol	**UJ**
MW4-ROX-013014	SVOCs	3&4-Methylphenol	**UJ**
MW4-ROX-013014	SVOCs	2-Nitrophenol	**UJ**
MW4-ROX-013014	SVOCs	4-Nitrophenol	**UJ**
MW4-ROX-013014	SVOCs	Pentachlorophenol	**UJ**
MW4-ROX-013014	SVOCs	Phenol	**J**
MW4-ROX-013014	SVOCs	2,4,5-Trichlorophenol	**UJ**
MW4-ROX-013014	SVOCs	2,4,6-Trichlorophenol	**UJ**

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
MW8-ROX-013014	MW8-ROX-013014-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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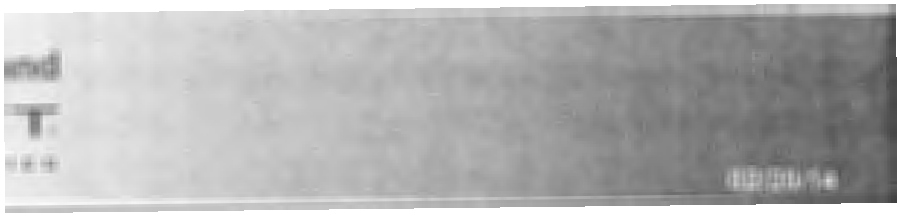
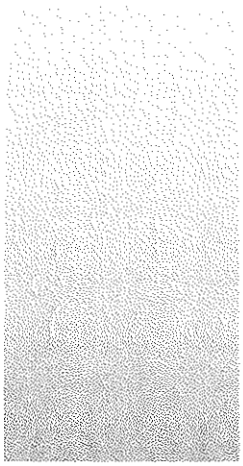
ACCUTES
LABORATOR





Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC28017

Sampling Date: 01/30/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Reviewed on 2/27/14 DFC

Total number of pages in report: 83

NELAP ACCREDITED TNI LABORATORY

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.

Reza Tand
Lab Director

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: MC28017

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC28017-1	01/30/14	09:30	LRKH	01/31/14	AQ	Ground Water	MW4-ROX-013014
MC28017-2	01/30/14	13:20	LRKH	01/31/14	AQ	Ground Water	MW7-ROX-013014
MC28017-3	01/30/14	14:05	LRKH	01/31/14	AQ	Ground Water	MW8-ROX-013014
MC28017-4	01/30/14	14:05	LRKH	01/31/14	AQ	Ground Water	MW8-ROX-013014-DUP
MC28017-5	01/30/14	00:00	LRKH	01/31/14	AQ	Trip Blank Water	TB-ROX-013014-HCL
MC28017-6	01/30/14	00:00	LRKH	01/31/14	AQ	Trip Blank Water	TB-ROX-013014-ST

ACCUTEST LABORATORIES

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil **Job No** MC28017

Site: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central **Report Date** 2/12/2014 4:00:15 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 01/30/2014 and were received at Accutest on 01/31/2014 properly preserved, at 0.8 Deg. C and intact. These Samples received an Accutest job number of MC28017. 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:** MSV1046

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28113-4MS, MC28113-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for Chloroethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acetone 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-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration standard MSV1046-CC1019 for 2-chloroethyl vinyl ether exc eed 40% Difference (response biased high). Associated samples are non-detect for these compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP36729

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC27800-18MS, MC27800-18MSD were used as the QC samples indicated.
- MC28017-1, MC28017-2, MC28017-3, MC28017-4 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- MC28017-1: Confirmation run for surrogate recoveries.
- MC28017-1 for Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ **Batch ID:** OP36730

- 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) MC27800-19MS, MC27800-19MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP36754

- 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) MC28000-5MS, MC28000-5MSD 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(MC28017).

Summary of Hits

Job Number: MC28017
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/30/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC28017-1	MW4-ROX-013014					
Benzene		2010	50	45	ug/l	SW846 8260C
n-Butylbenzene		0.58 J	5.0	0.54	ug/l	SW846 8260C
Ethylbenzene		0.48 J	1.0	0.38	ug/l	SW846 8260C
Isopropylbenzene		2.1 J	5.0	0.64	ug/l	SW846 8260C
n-Propylbenzene		2.6 J	5.0	0.59	ug/l	SW846 8260C
Toluene		3.7	1.0	0.46	ug/l	SW846 8260C
m,p-Xylene		13.2	1.0	0.91	ug/l	SW846 8260C
o-Xylene		4.9	1.0	0.41	ug/l	SW846 8260C
Xylene (total)		18.1	1.0	0.41	ug/l	SW846 8260C
Phenol		16.4 J	5.4	0.55	ug/l	SW846 8270D
Di-n-butyl phthalate		~~1.3 JB~~ U	5.4	0.42	ug/l	SW846 8270D
1-Methylnaphthalene		0.27	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		0.22	0.22	0.080	ug/l	SW846 8270D BY SIM
Phenanthrene		~~0.022 J~~ U	0.054	0.014	ug/l	SW846 8270D BY SIM
MC28017-2	MW7-ROX-013014					
Benzene		1490000	13000	11000	ug/l	SW846 8260C
Phenol		31.4	5.0	0.51	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.70 JB~~ U	5.0	0.39	ug/l	SW846 8270D
Acenaphthene		0.28	0.10	0.069	ug/l	SW846 8270D BY SIM
Anthracene		0.29	0.10	0.092	ug/l	SW846 8270D BY SIM
Fluorene		0.21	0.10	0.099	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		5.9	0.20	0.050	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		8.3	0.20	0.074	ug/l	SW846 8270D BY SIM
Phenanthrene		0.29	0.050	0.013	ug/l	SW846 8270D BY SIM
MC28017-3	MW8-ROX-013014					
Benzene		721000	1300	1100	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1920 J	2500	1100	ug/l	SW846 8260C
2,4-Dimethylphenol		12.4	10	1.2	ug/l	SW846 8270D
2-Methylphenol		12.8	10	1.3	ug/l	SW846 8270D
3&4-Methylphenol		19.8	10	2.1	ug/l	SW846 8270D
Phenol		105	5.1	0.52	ug/l	SW846 8270D
Dibenzofuran		0.50 J	2.0	0.16	ug/l	SW846 8270D
Di-n-butyl phthalate		~~1.1 JB~~ U	5.1	0.40	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.53 J	2.0	0.50	ug/l	SW846 8270D
Acenaphthene		0.20	0.10	0.070	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.089 J	0.10	0.051	ug/l	SW846 8270D BY SIM
Fluorene		0.54	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		13.7	0.20	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		12.3	0.20	0.076	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC28017
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/30/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Phenanthrene		0.18	0.051	0.013	ug/l	SW846 8270D BY SIM
MC28017-4	**MW8-ROX-013014-DUP**					
Benzene		748000	1300	1100	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1990 J	2500	1100	ug/l	SW846 8260C
2,4-Dimethylphenol		12.1	11	1.2	ug/l	SW846 8270D
2-Methylphenol		12.9	11	1.4	ug/l	SW846 8270D
3&4-Methylphenol		19.0	11	2.2	ug/l	SW846 8270D
Phenol		135	5.4	0.56	ug/l	SW846 8270D
Dibenzofuran		0.53 J	2.2	0.17	ug/l	SW846 8270D
Di-n-butyl phthalate		~~0.92 JB~~	5.4	0.42	ug/l	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.72 J	2.2	0.53	ug/l	SW846 8270D
Acenaphthene		0.21	0.11	0.075	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.083 J	0.11	0.054	ug/l	SW846 8270D BY SIM
Fluorene		0.52	0.11	0.11	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		13.6	0.22	0.054	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		12.3	0.22	0.081	ug/l	SW846 8270D BY SIM
Phenanthrene		0.19	0.054	0.014	ug/l	SW846 8270D BY SIM
MC28017-5	**TB-ROX-013014-HCL**					
No hits reported in this sample.						
MC28017-6	**TB-ROX-013014-ST**					
No hits reported in this sample.						

New England ACCUTEST LABORATORIES

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW4-ROX-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27761.D	1	02/10/14	AMY	n/a	n/a	MSV1046
Run #2	V27767.D	100	02/10/14	AMY	n/a	n/a	MSV1046

	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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	2010 [a]	50	45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	0.58	5.0	0.54	ug/l	J
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	0.48	1.0	0.38	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	2.1	5.0	0.64	ng/l	J
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	2.6	5.0	0.59	ug/l	J
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	3.7	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	13.2	1.0	0.91	ug/l	
95-47-6	o-Xylene	4.9	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	18.1	1.0	0.41	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-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	106%	70-130%
2037-26-5	Toluene-D8	93%	97%	70-130%
460-00-4	4-Bromofluorobenzene	109%	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:	MW4-ROX-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17542.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
Run #2 [a]	W17607.D	1	02/06/14	KR	01/31/14	OP36729	MSW773

	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2	930 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND UJ	11	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	16.4 J	5.4	0.55	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND UJ	11	0.62	ug/l	UJ
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	~~1.3~~ U	5.4	0.42	ug/l	JB U
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	MW4-ROX-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	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	16%	16%	15-110%
4165-62-2	Phenol-d5	13% [b]	12% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	57%	58%	15-110%
4165-60-0	Nitrobenzene-d5	78%	79%	30-130%
321-60-8	2-Fluorobiphenyl	74%	74%	30-130%
1718-51-0	Terphenyl-d14	94%	95%	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 re-extraction/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:	MW4-ROX-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87238.D	1	02/03/14	KR	01/31/14	OP36730	MSI3243
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	ND	0.11	0.074	ug/l	
208-96-8	Acenaphthylene	ND	0.11	0.053	ug/l	
120-12-7	Anthracene	ND	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	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	0.27	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	0.22	0.22	0.080	ug/l	
85-01-8	Phenanthrene	~~0.022~~ U	0.054	0.014	ug/l	J U
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	81%		30-130%
321-60-8	2-Fluorobiphenyl	68%		30-130%
1718-51-0	Terphenyl-d14	89%		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-013014		
Lab Sample ID:	MC28017-1	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34508.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	121%		36-173%
460-00-4	Bromofluorobenzene (S)	127%		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-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27768.D	2500	02/10/14	AMY	n/a	n/a	MSV1046
Run #2	V27762.D	25000	02/10/14	AMY	n/a	n/a	MSV1046

	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	25000	6900	ug/l	
107-02-8	Acrolein	ND	63000	16000	ug/l	
107-13-1	Acrylonitrile	ND	13000	8800	ug/l	
71-43-2	Benzene	1490000 [a]	13000	11000	ug/l	
108-86-1	Bromobenzene	ND	13000	1100	ug/l	
74-97-5	Bromochloromethane	ND	13000	1600	ug/l	
75-27-4	Bromodichloromethane	ND	2500	830	ug/l	
75-25-2	Bromoform	ND	2500	1000	ug/l	
74-83-9	Bromomethane	ND	5000	3800	ug/l	
78-93-3	2-Butanone (MEK)	ND	13000	11000	ug/l	
104-51-8	n-Butylbenzene	ND	13000	1400	ug/l	
135-98-8	sec-Butylbenzene	ND	13000	1500	ug/l	
98-06-6	tert-Butylbenzene	ND	13000	2200	ug/l	
75-15-0	Carbon disulfide	ND	13000	1900	ug/l	
56-23-5	Carbon tetrachloride	ND	2500	1500	ug/l	
108-90-7	Chlorobenzene	ND	2500	1200	ug/l	
75-00-3	Chloroethane	ND	5000	2100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	13000	8200	ug/l	
67-66-3	Chloroform	ND	2500	1200	ug/l	
74-87-3	Chloromethane	ND	5000	3600	ug/l	
95-49-8	o-Chlorotoluene	ND	13000	1400	ug/l	
106-43-4	p-Chlorotoluene	ND	13000	1200	ug/l	
124-48-1	Dibromochloromethane	ND	2500	820	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2500	870	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2500	750	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2500	660	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5000	3000	ug/l	
75-34-3	1,1-Dichloroethane	ND	2500	930	ug/l	
107-06-2	1,2-Dichloroethane	ND	2500	880	ug/l	
75-35-4	1,1-Dichloroethene	ND	2500	1700	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2500	1300	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2500	1400	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 componnd

Report of Analysis

Client Sample ID:	MW7-ROX-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	5000	1100	ug/l	
142-28-9	1,3-Dichloropropane	ND	13000	2400	ug/l	
594-20-7	2,2-Dichloropropane	ND	13000	3100	ug/l	
563-58-6	1,1-Dichloropropene	ND	13000	1600	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1300	540	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1300	710	ug/l	
123-91-1	1,4-Dioxane	ND	63000	39000	ug/l	
97-63-2	Ethyl methacrylate	ND	13000	2000	ug/l	
100-41-4	Ethylbenzene	ND	2500	940	ug/l	
87-68-3	Hexachlorobutadiene	ND	13000	3100	ug/l	
591-78-6	2-Hexanone	ND	13000	9700	ug/l	
98-82-8	Isopropylbenzene	ND	13000	1600	ug/l	
99-87-6	p-Isopropyltoluene	ND	13000	1400	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2500	1100	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	13000	3200	ug/l	
74-95-3	Methylene bromide	ND	13000	1100	ug/l	
75-09-2	Methylene chloride	ND	5000	1000	ug/l	
91-20-3	Naphthalene	ND	13000	2000	ug/l	
103-65-1	n-Propylbenzene	ND	13000	1500	ug/l	
100-42-5	Styrene	ND	13000	1200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2500	1100	ug/l	
79-34-5	1,1,2,2-Tetrachloroethaue	ND	1300	1000	ug/l	
127-18-4	Tetrachloroethene	ND	2500	1500	ug/l	
108-88-3	Toluene	ND	2500	1200	ug/l	
87-61-6	1,2,3-Trichlorobeuzene	ND	13000	1900	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	13000	1100	ng/l	
71-55-6	1,1,1-Trichloroethane	ND	2500	2300	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2500	1200	ug/l	
79-01-6	Trichloroethene	ND	2500	1100	ug/l	
75-69-4	Trichlorofluoromethane	ND	2500	1500	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	13000	1700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	13000	1200	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	13000	2700	ug/l	
108-05-4	Vinyl Acetate	ND	13000	3300	ug/l	
75-01-4	Vinyl chloride	ND	2500	1500	ug/l	
	m,p-Xylene	ND	2500	2300	ug/l	
95-47-6	o-Xylene	ND	2500	1000	ug/l	
1330-20-7	Xylene (total)	ND	2500	1000	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-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	105%	70-130%
2037-26-5	Toluene-D8	95%	95%	70-130%
460-00-4	4-Bromofluorobenzene	104%	105%	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:	MW7-ROX-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17543.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Cbloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylpbenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	31.4	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	his(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-hutyl phthalate	0.70	5.0	0.39	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	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-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	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	37%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	68%		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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RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates 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-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87239.D	1	02/03/14	KR	01/31/14	OP36730	MSI3243
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	0.28	0.10	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	0.29	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	0.21	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	5.9	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	8.3	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.29	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	70%		30-130%
321-60-8	2-Fluorobiphenyl	63%		30-130%
1718-51-0	Terphenyl-d14	89%		30-130%

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 evideuce of a compound

Report of Analysis

Client Sample ID:	MW7-ROX-013014		
Lab Sample ID:	MC28017-2	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34509.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	89%		36-173%
460-00-4	Bromofluorobenzene (S)	103%		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 fonnd in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW8-ROX-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27769.D	2500	02/10/14	AMY	n/a	n/a	MSV1046
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	25000	6900	ug/l	
107-02-8	Acrolein	ND	63000	16000	ug/l	
107-13-1	Acrylonitrile	ND	13000	8800	ug/l	
71-43-2	Benzene	721000	1300	1100	ug/l	
108-86-1	Bromobenzene	ND	13000	1100	ug/l	
74-97-5	Bromochloromethane	ND	13000	1600	ug/l	
75-27-4	Bromodichloromethane	ND	2500	830	ug/l	
75-25-2	Bromoform	ND	2500	1000	ug/l	
74-83-9	Bromomethane	ND	5000	3800	ug/l	
78-93-3	2-Butanone (MEK)	ND	13000	11000	ug/l	
104-51-8	n-Butylbenzene	ND	13000	1400	ug/l	
135-98-8	sec-Butylbenzene	ND	13000	1500	ug/l	
98-06-6	tert-Butylbenzene	ND	13000	2200	ug/l	
75-15-0	Carbon disulfide	ND	13000	1900	ug/l	
56-23-5	Carbon tetrachloride	ND	2500	1500	ug/l	
108-90-7	Chlorobenzene	ND	2500	1200	ug/l	
75-00-3	Chloroethane	ND	5000	2100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	13000	8200	ug/l	
67-66-3	Chloroform	ND	2500	1200	ug/l	
74-87-3	Chloromethane	ND	5000	3600	ug/l	
95-49-8	o-Chlorotoluene	ND	13000	1400	ug/l	
106-43-4	p-Chlorotoluene	ND	13000	1200	ug/l	
124-48-1	Dibromochloromethane	ND	2500	820	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2500	870	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2500	750	ug/l	
106-46-7	1,4-Dichlorohenzene	ND	2500	660	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5000	3000	ug/l	
75-34-3	1,1-Dichloroethane	ND	2500	930	ug/l	
107-06-2	1,2-Dichloroethane	ND	2500	880	ug/l	
75-35-4	1,1-Dichloroethene	ND	2500	1700	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2500	1300	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2500	1400	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-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	5000	1100	ug/l	
142-28-9	1,3-Dichloropropane	ND	13000	2400	ug/l	
594-20-7	2,2-Dichloropropane	ND	13000	3100	ug/l	
563-58-6	1,1-Dichloropropene	ND	13000	1600	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1300	540	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1300	710	ug/l	
123-91-1	1,4-Dioxane	ND	63000	39000	ug/l	
97-63-2	Ethyl methacrylate	ND	13000	2000	ug/l	
100-41-4	Ethylbenzene	ND	2500	940	ug/l	
87-68-3	Hexachlorobutadiene	ND	13000	3100	ug/l	
591-78-6	2-Hexanone	ND	13000	9700	ug/l	
98-82-8	Isopropylbenzene	ND	13000	1600	ug/l	
99-87-6	p-Isopropyltoluene	ND	13000	1400	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1920	2500	1100	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	13000	3200	ug/l	
74-95-3	Methylene bromide	ND	13000	1100	ug/l	
75-09-2	Methylene chloride	ND	5000	1000	ug/l	
91-20-3	Naphthalene	ND	13000	2000	ug/l	
103-65-1	n-Propylbenzeue	ND	13000	1500	ug/l	
100-42-5	Styrene	ND	13000	1200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2500	1100	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1300	1000	ug/l	
127-18-4	Tetrachloroethene	ND	2500	1500	ug/l	
108-88-3	Toluene	ND	2500	1200	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	13000	1900	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	13000	1100	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2500	2300	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2500	1200	ug/l	
79-01-6	Trichloroethene	ND	2500	1100	ug/l	
75-69-4	Trichlorofluoromethane	ND	2500	1500	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	13000	1700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	13000	1200	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	13000	2700	ug/l	
108-05-4	Vinyl Acetate	ND	13000	3300	ug/l	
75-01-4	Vinyl chloride	ND	2500	1500	ug/l	
	m,p-Xylene	ND	2500	2300	ug/l	
95-47-6	o-Xylene	ND	2500	1000	ug/l	
1330-20-7	Xylene (total)	ND	2500	1000	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-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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:	MW8-ROX-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17544.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.39	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.50	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	12.4	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	12.8	10	1.3	ug/l	
	3&4-Methylphenol	19.8	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.51	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	105	5.1	0.52	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.58	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.65	ug/l	
101-55-3	4-Bromophenyl pheuyl ether	ND	5.1	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.87	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.94	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.69	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.65	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.51	ug/l	
132-64-9	Dibenzofuran	0.50	2.0	0.16	ug/l	J
84-74-2	Di-n-butyl phthalate	~~1.1~~	5.1	0.40	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.1	0.44	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-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.51	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.51	ug/l	
117-81-7	bis(2-Ethylhexyl)phtbalate	0.53	2.0	0.50	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.1	0.30	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	
67-72-1	Hexachloroetbane	ND	5.1	0.45	ug/l	
78-59-1	Isophorone	ND	5.1	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.51	ug/l	
100-01-6	4-Nitroaniliue	ND	10	4.4	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.51	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.82	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.55	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	47%		15-110%
4165-62-2	Phenol-d5	35%		15-110%
118-79-6	2,4,6-Tribromophenol	99%		15-110%
4165-60-0	Nitrobenzene-d5	75%		30-130%
321-60-8	2-Fluorobiphenyl	73%		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:	MW8-ROX-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87240.D	1	02/03/14	KR	01/31/14	OP36730	MSI3243
Run #2							

	Initial Volume	Final Volume
Run #1	980 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	0.070	ug/l	
208-96-8	Acenaphthylene	0.089	0.10	0.051	ug/l	J
120-12-7	Anthracene	ND	0.10	0.094	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.020	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	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	0.033	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.041	ug/l	
86-73-7	Fluorene	0.54	0.10	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.031	ug/l	
90-12-0	1-Methylnaphthalene	13.7	0.20	0.051	ug/l	
91-57-6	2-Methylnaphthalene	12.3	0.20	0.076	ug/l	
85-01-8	Phenanthrene	0.18	0.051	0.013	ug/l	
129-00-0	Pyrene	ND	0.10	0.039	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		30-130%
321-60-8	2-Fluorobiphenyl	67%		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:	MW8-ROX-013014		
Lab Sample ID:	MC28017-3	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34510.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	96%		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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27770.D	2500	02/10/14	AMY	n/a	n/a	MSV1046
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	25000	6900	ug/l	
107-02-8	Acrolein	ND	63000	16000	ug/l	
107-13-1	Acrylonitrile	ND	13000	8800	ug/l	
71-43-2	Benzene	748000	1300	1100	ug/l	
108-86-1	Bromobenzene	ND	13000	1100	ug/l	
74-97-5	Bromochloromethane	ND	13000	1600	ug/l	
75-27-4	Bromodichloromethane	ND	2500	830	ug/l	
75-25-2	Bromoform	ND	2500	1000	ug/l	
74-83-9	Bromomethane	ND	5000	3800	ug/l	
78-93-3	2-Butanone (MEK)	ND	13000	11000	ug/l	
104-51-8	n-Butylbenzene	ND	13000	1400	ug/l	
135-98-8	sec-Butylbenzene	ND	13000	1500	ug/l	
98-06-6	tert-Butylbenzene	ND	13000	2200	ug/l	
75-15-0	Carbon disulfide	ND	13000	1900	ug/l	
56-23-5	Carbon tetrachloride	ND	2500	1500	ug/l	
108-90-7	Chlorobenzene	ND	2500	1200	ug/l	
75-00-3	Chloroethane	ND	5000	2100	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	13000	8200	ug/l	
67-66-3	Chloroform	ND	2500	1200	ug/l	
74-87-3	Chloromethane	ND	5000	3600	ug/l	
95-49-8	o-Chlorotoluene	ND	13000	1400	ug/l	
106-43-4	p-Chlorotoluene	ND	13000	1200	ug/l	
124-48-1	Dibromochloromethane	ND	2500	820	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2500	870	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2500	750	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2500	660	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5000	3000	ug/l	
75-34-3	1,1-Dichloroethane	ND	2500	930	ug/l	
107-06-2	1,2-Dichloroethane	ND	2500	880	ug/l	
75-35-4	1,1-Dichloroethene	ND	2500	1700	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	2500	1300	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	2500	1400	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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	5000	1100	ug/l	
142-28-9	1,3-Dichloropropane	ND	13000	2400	ug/l	
594-20-7	2,2-Dichloropropane	ND	13000	3100	ug/l	
563-58-6	1,1-Dichloropropene	ND	13000	1600	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1300	540	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1300	710	ug/l	
123-91-1	1,4-Dioxane	ND	63000	39000	ug/l	
97-63-2	Ethyl methacrylate	ND	13000	2000	ug/l	
100-41-4	Ethylbenzene	ND	2500	940	ug/l	
87-68-3	Hexachlorobutadiene	ND	13000	3100	ug/l	
591-78-6	2-Hexanone	ND	13000	9700	ug/l	
98-82-8	Isopropylbenzene	ND	13000	1600	ug/l	
99-87-6	p-Isopropyltoluene	ND	13000	1400	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1990	2500	1100	ug/l	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	13000	3200	ug/l	
74-95-3	Methylene bromide	ND	13000	1100	ug/l	
75-09-2	Methylene chloride	ND	5000	1000	ug/l	
91-20-3	Naphthalene	ND	13000	2000	ug/l	
103-65-1	n-Propylbenzene	ND	13000	1500	ug/l	
100-42-5	Styrene	ND	13000	1200	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2500	1100	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1300	1000	ug/l	
127-18-4	Tetrachloroethene	ND	2500	1500	ug/l	
108-88-3	Toluene	ND	2500	1200	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	13000	1900	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	13000	1100	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2500	2300	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2500	1200	ug/l	
79-01-6	Trichloroethene	ND	2500	1100	ug/l	
75-69-4	Trichlorofluoromethane	ND	2500	1500	ug/l	
96-18-4	1,2,3-Tricbloropropane	ND	13000	1700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	13000	1200	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	13000	2700	ug/l	
108-05-4	Vinyl Acetate	ND	13000	3300	ug/l	
75-01-4	Vinyl chloride	ND	2500	1500	ug/l	
	m,p-Xylene	ND	2500	2300	ug/l	
95-47-6	o-Xylene	ND	2500	1000	ug/l	
1330-20-7	Xylene (total)	ND	2500	1000	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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		70-130%
2037-26-5	Toluene-D8	95%		70-130%
460-00-4	4-Bromofluorobenzene	103%		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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17545.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	12.1	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	12.9	11	1.4	ug/l	
	3&4-Methylphenol	19.0	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	135	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methaue	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	0.53	2.2	0.17	ug/l	J
84-74-2	Di-n-butyl phthalate	~~0.92~~	5.4	0.42	ug/l	JB
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	0.72	2.2	0.53	ug/l	J
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	43%		15-110%
4165-62-2	Phenol-d5	33%		15-110%
118-79-6	2,4,6-Tribromophenol	95%		15-110%
4165-60-0	Nitrobenzene-d5	69%		30-130%
321-60-8	2-Fluorobiphenyl	68%		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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87241.D	1	02/04/14	KR	01/31/14	OP36730	MSI3243
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	0.21	0.11	0.075	ug/l	
208-96-8	Acenaphthylene	0.083	0.11	0.054	ug/l	J
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	0.52	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	13.6	0.22	0.054	ug/l	
91-57-6	2-Methylnaphthalene	12.3	0.22	0.081	ug/l	
85-01-8	Phenanthrene	0.19	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	72%		30-130%
321-60-8	2-Fluorobiphenyl	63%		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:	MW8-ROX-013014-DUP		
Lab Sample ID:	MC28017-4	**Date Sampled:**	01/30/14
Matrix:	AQ - Ground Water	**Date Received:**	01/31/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Ceutral Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34512.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	115%		36-173%
460-00-4	Bromofluorobenzene (S)	132%		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-013014-HCL		
Lab Sample ID:	MC28017-5	**Date Sampled:**	01/30/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27755.D	1	02/10/14	AMY	n/a	n/a	MSV1046
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-013014-HCL		
Lab Sample ID:	MC28017-5	**Date Sampled:**	01/30/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-013014-HCL		
Lab Sample ID:	MC28017-5	**Date Sampled:**	01/30/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/31/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	96%		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	

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-013014-ST		
Lab Sample ID:	MC28017-6	**Date Sampled:**	01/30/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	01/31/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34513.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	113%		36-173%
460-00-4	Bromofluorobenzene (S)	104%		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 Labs, 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200)
☐ OTHER (_____)
☐ SFL (_____)

Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SDSCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 5 6 4 0

SAP #: 3 4 0 0 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 1/30/14

PAGE: 1 of 1

Company Name	URS CORPORATION
Address	1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
Project Contact (Name, Title)	Elizabeth Kunkel, Wendy Pennington, Bob Billman
Telephone	314-429-0100
Fax	314-429-0462
Bob Billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com	
Site Address, Street and City	500 South Central Ave, ROXANA
State	IL
Global ID #	
Project Name	Roxana Quarterly GW / 21662973.03001
Sampler Name	L. Rathnow, K. Hurst
Lab Use Only	mc28017

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 REIMBURSEMENT RATE APPLIES
☐ EDD 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 HCL	HNO3	H2SO4	NONE	OTHER	No. of Cont.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW4-ROX-013014	1/30/14	0930	Water	2			2	2	6	X	X	X	X	0	
-2	MW7-ROX-013014	↓	1320	↓	↓			↓	↓	↓	X	X	X	X	↓	
-3	MW8-ROX-013014	↓	1405	↓	↓			↓	↓	↓	X	X	X	X	↓	
-4	MW8-ROX-013014-Dup	↓	1405	↓	↓			↓	↓	↓	X	X	X	X	↓	
-5	TB-ROX-013014-HCL	↓	00:00	↓	2					2	X				↓	
-6	TB-ROX-013014-ST	↓	00:00	↓					2	2		X			↓	
																19D, 4C3

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/30/14	1700
FEDX	[signature]	1-31-14	930

1/31/14 - collection time added on -3, -4 per sample labels TR

Cooler Reading 0.8°C

MC28017: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC28017 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 1/31/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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

MC28017: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28017

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28017-1 Collected: 30-JAN-14 09:30 By: LRKH Received: 31-JAN-14 By: MW4-ROX-013014						
MC28017-1	SW846 8270D	03-FEB-14 16:05	KR	31-JAN-14	PA	AB8270SL+
MC28017-1	SW846 8270D BY SIM	03-FEB-14 22:58	KR	31-JAN-14	PA	B8270SIMSL
MC28017-1	SW846 8011	04-FEB-14 13:30	NK	03-FEB-14	AZ	V8011SL
MC28017-1	SW846 8270D	06-FEB-14 18:21	KR	31-JAN-14	PA	AB8270SL+
MC28017-1	SW846 8260C	10-FEB-14 14:01	AMY			V8260SL+
MC28017-1	SW846 8260C	10-FEB-14 16:39	AMY			V8260SL+
MC28017-2 Collected: 30-JAN-14 13:20 By: LRKH Received: 31-JAN-14 By: MW7-ROX-013014						
MC28017-2	SW846 8270D	03-FEB-14 16:29	KR	31-JAN-14	PA	AB8270SL+
MC28017-2	SW846 8270D BY SIM	03-FEB-14 23:21	KR	31-JAN-14	PA	B8270SIMSL
MC28017-2	SW846 8011	04-FEB-14 13:53	NK	03-FEB-14	AZ	V8011SL
MC28017-2	SW846 8260C	10-FEB-14 14:27	AMY			V8260SL+
MC28017-2	SW846 8260C	10-FEB-14 17:06	AMY			V8260SL+
MC28017-3 Collected: 30-JAN-14 14:05 By: LRKH Received: 31-JAN-14 By: MW8-ROX-013014						
MC28017-3	SW846 8270D	03-FEB-14 16:52	KR	31-JAN-14	PA	AB8270SL+
MC28017-3	SW846 8270D BY SIM	03-FEB-14 23:43	KR	31-JAN-14	PA	B8270SIMSL
MC28017-3	SW846 8011	04-FEB-14 14:15	NK	03-FEB-14	AZ	V8011SL
MC28017-3	SW846 8260C	10-FEB-14 17:33	AMY			V8260SL+
MC28017-4 Collected: 30-JAN-14 14:05 By: LRKH Received: 31-JAN-14 By: MW8-ROX-013014-DUP						
MC28017-4	SW846 8270D	03-FEB-14 17:16	KR	31-JAN-14	PA	AB8270SL+
MC28017-4	SW846 8270D BY SIM	04-FEB-14 00:06	KR	31-JAN-14	PA	B8270SIMSL
MC28017-4	SW846 8011	04-FEB-14 15:01	NK	03-FEB-14	AZ	V8011SL
MC28017-4	SW846 8260C	10-FEB-14 17:59	AMY			V8260SL+
MC28017-5 Collected: 30-JAN-14 00:00 By: LRKH Received: 31-JAN-14 By: TB-ROX-013014-HCL						
MC28017-5	SW846 8260C	10-FEB-14 11:23	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28017

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28017-6 Collected: 30-JAN-14 00:00 By: LRKH Received: 31-JAN-14 By: TB-ROX-013014-ST						
MC28017-6	SW846 8011	04-FEB-14 15:24	NK	03-FEB-14	AZ	V8011SL

Accutest Internal Chain of Custody

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/31/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28017-1.2	Walk In Ref #22	Thomas Abruzzise	01/31/14 14:54	Retrieve from Storage
MC28017-1.3	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28017-1.3	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28017-1.3	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28017-1.3	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28017-1.4	VOC Ref #4	Amy Min Yang	01/31/14 14:26	Retrieve from Storage
MC28017-1.4	Amy Min Yang	GCMSP	01/31/14 14:26	Load on Instrument
MC28017-1.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC28017-1.4	Krysten Dufort	VOC Ref #4	02/03/14 10:00	Return to Storage
MC28017-1.5	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage
MC28017-2.1	Walk In Ref #22	Thomas Abruzzise	01/31/14 14:54	Retrieve from Storage
MC28017-2.3	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28017-2.3	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28017-2.3	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28017-2.3	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28017-2.4	VOC Ref #4	Amy Min Yang	01/31/14 14:26	Retrieve from Storage
MC28017-2.4	Amy Min Yang	GCMSP	01/31/14 14:26	Load on Instrument
MC28017-2.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC28017-2.4	Krysten Dufort	VOC Ref #4	02/03/14 10:00	Return to Storage
MC28017-2.6	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage
MC28017-3.1	Walk In Ref #22	Thomas Abruzzise	01/31/14 14:54	Retrieve from Storage
MC28017-3.3	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28017-3.3	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28017-3.3	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrumeut
MC28017-3.3	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28017-3.4	VOC Ref #4	Amy Min Yang	01/31/14 14:26	Retrieve from Storage
MC28017-3.4	Amy Min Yaug	GCMSP	01/31/14 14:26	Load on Instrument
MC28017-3.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC28017-3.4	Krysten Dufort	VOC Ref #4	02/03/14 10:00	Return to Storage
MC28017-3.5	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage
MC28017-4.2	Walk In Ref #22	Thomas Abruzzise	01/31/14 14:54	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 01/31/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28017-4.3	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28017-4.3	Anuy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28017-4.3	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28017-4.3	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Retnrn to Storage
MC28017-4.4	VOC Ref #4	Amy Min Yang	01/31/14 14:26	Retrieve from Storage
MC28017-4.4	Amy Min Yang	GCMSP	01/31/14 14:26	Load on Instrument
MC28017-4.4	GCMSP	Krysten Dufort	02/03/14 09:59	Unload from Instrument
MC28017-4.4	Krysten Dufort	VOC Ref #4	02/03/14 10:00	Return to Storage
MC28017-4.6	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage
MC28017-5.1	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28017-5.1	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28017-5.1	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28017-5.1	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28017-6.2	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroetbyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	70-130%
2037-26-5	Toluene-D8	97%	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	

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	38.2	76	70-130
107-02-8	Acrolein	50	53.6	107	70-130
107-13-1	Acrylonitrile	100	76.6	77	70-130
71-43-2	Benzene	50	49.9	100	70-130
108-86-1	Bromobenzene	50	53.3	107	70-130
74-97-5	Bromochloromethane	50	49.8	100	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	43.4	87	70-130
74-83-9	Bromomethane	50	56.1	112	70-130
78-93-3	2-Butanone (MEK)	50	39.7	79	70-130
104-51-8	n-Butylbenzene	50	56.8	114	70-130
135-98-8	sec-Butylbenzene	50	58.5	117	70-130
98-06-6	tert-Butylbenzene	50	57.7	115	70-130
75-15-0	Carbon disulfide	50	41.6	83	70-130
56-23-5	Carbon tetrachloride	50	54.5	109	70-130
108-90-7	Chlorobenzene	50	45.7	91	70-130
75-00-3	Chloroethane	50	68.1	136* a	70-130
110-75-8	2-Chloroethyl vinyl ether	50	48.1	96	70-130
67-66-3	Chloroform	50	48.8	98	70-130
74-87-3	Chloromethane	50	54.2	108	70-130
95-49-8	o-Chlorotoluene	50	52.5	105	70-130
106-43-4	p-Chlorotoluene	50	54.2	108	70-130
124-48-1	Dibromochloromethane	50	56.2	112	70-130
95-50-1	1,2-Dichlorobenzene	50	49.2	98	70-130
541-73-1	1,3-Dichlorobenzene	50	50.2	100	70-130
106-46-7	1,4-Dichlorobenzene	50	49.7	99	70-130
75-71-8	Dichlorodifluoromethane	50	50.5	101	70-130
75-34-3	1,1-Dichloroethane	50	49.7	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	48.1	96	70-130
156-59-2	cis-1,2-Dichloroethene	50	50.4	101	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.6	97	70-130
78-87-5	1,2-Dichloropropane	50	49.3	99	70-130
142-28-9	1,3-Dichloropropane	50	48.9	98	70-130
594-20-7	2,2-Dichloropropane	50	60.2	120	70-130
563-58-6	1,1-Dichloropropene	50	50.2	100	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	47.4	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.7	99	70-130
123-91-1	1,4-Dioxane	250	202	81	70-130
97-63-2	Ethyl methacrylate	50	45.3	91	77-137
100-41-4	Ethylbenzene	50	52.9	106	70-130
87-68-3	Hexachlorobutadiene	50	57.5	115	70-130
591-78-6	2-Hexanone	50	40.7	81	70-130
98-82-8	Isopropylbenzene	50	59.3	119	70-130
99-87-6	p-Isopropyltolnene	50	56.7	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	53.0	106	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.7	99	70-130
74-95-3	Methylene bromide	50	49.0	98	70-130
75-09-2	Methylene chloride	50	44.9	90	70-130
91-20-3	Naphthalene	50	50.4	101	70-130
103-65-1	n-Propylbenzene	50	56.5	113	70-130
100-42-5	Styrene	50	48.5	97	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	52.9	106	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.3	101	70-130
127-18-4	Tetrachloroethene	50	52.1	104	70-130
108-88-3	Toluene	50	53.7	107	70-130
87-61-6	1,2,3-Trichlorobenzene	50	57.8	116	70-130
120-82-1	1,2,4-Trichlorobenzene	50	59.8	120	70-130
71-55-6	1,1,1-Trichloroethane	50	54.8	110	70-130
79-00-5	1,1,2-Trichloroethane	50	49.2	98	70-130
79-01-6	Trichloroethene	50	51.7	103	70-130
75-69-4	Trichlorofluoromethane	50	62.4	125	70-130
96-18-4	1,2,3-Trichloropropane	50	53.7	107	70-130
95-63-6	1,2,4-Trimethylbenzene	50	57.4	115	70-130
108-67-8	1,3,5-Trimethylbenzene	50	58.3	117	70-130
108-05-4	Vinyl Acetate	50	49.5	99	70-130
75-01-4	Vinyl chloride	50	54.2	108	70-130
	m,p-Xylene	100	88.0	88	70-130
95-47-6	o-Xylene	50	44.5	89	70-130
1330-20-7	Xylene (total)	150	132	88	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxaua 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	MC28113-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	142	57* [a]	124	50* [a]	14	70-130/30
107-02-8	Acrolein	ND		250	230	92	217	87	6	70-130/30
107-13-1	Acrylonitrile	ND		500	401	80	374	75	7	70-130/30
71-43-2	Benzene	ND		250	237	95	237	95	0	70-130/30
108-86-1	Bromobenzene	ND		250	256	102	260	104	2	70-130/30
74-97-5	Bromochloromethane	ND		250	235	94	237	95	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	263	105	260	104	1	70-130/30
75-25-2	Bromoform	ND		250	207	83	201	80	3	70-130/30
74-83-9	Bromomethane	ND		250	244	98	250	100	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	163	65* [a]	150	60* [a]	8	70-130/30
104-51-8	n-Butylbenzene	ND		250	279	112	284	114	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	287	115	290	116	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	283	113	290	116	2	70-130/30
75-15-0	Carbon disulfide	ND		250	198	79	201	80	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	276	110	269	108	3	70-130/30
108-90-7	Chlorobenzene	ND		250	217	87	219	88	1	70-130/30
75-00-3	Chloroethane	ND		250	301	120	300	120	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	237	95	236	94	0	70-130/30
74-87-3	Chloromethane	ND		250	282	113	253	101	11	70-130/30
95-49-8	o-Chlorotoluene	ND		250	257	103	260	104	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	263	105	267	107	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	269	108	264	106	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	234	94	238	95	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	238	95	246	98	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	240	96	241	96	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	270	108	270	108	0	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	241	96	241	96	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	252	101	245	98	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	233	93	235	94	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	234	94	239	96	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	230	92	232	93	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	236	94	237	95	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	238	95	234	94	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	277	111	277	111	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	243	97	242	97	0	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Compound	MC28113-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	214	86	217	87	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	234	94	231	92	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1030	82	1000	80	3	70-130/30
97-63-2	Ethyl methacrylate	ND		250	217	87	209	84	4	72-139/30
100-41-4	Ethylbenzene	ND		250	252	101	253	101	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	273	109	294	118	7	70-130/30
591-78-6	2-Hexanone	ND		250	181	72	165	66* [a]	9	70-130/30
98-82-8	Isopropylbenzene	ND		250	290	116	293	117	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	275	110	282	113	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	4.5		250	256	101	244	96	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	250	100	230	92	8	70-130/30
74-95-3	Methylene bromide	ND		250	239	96	234	94	2	70-130/30
75-09-2	Methylene chloride	ND		250	215	86	218	87	1	70-130/30
91-20-3	Naphthalene	ND		250	223	89	235	94	5	70-130/30
103-65-1	n-Propylbenzene	ND		250	276	110	279	112	1	70-130/30
100-42-5	Styrene	ND		250	230	92	231	92	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	255	102	256	102	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	253	101	243	97	4	70-130/30
127-18-4	Tetrachloroethene	ND		250	250	100	251	100	0	70-130/30
108-88-3	Toluene	ND		250	256	102	253	101	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	254	102	273	109	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	272	109	282	113	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	263	105	263	105	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	239	96	235	94	2	70-130/30
79-01-6	Trichloroethene	ND		250	244	98	248	99	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	316	126	306	122	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	268	107	255	102	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	280	112	284	114	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	286	114	287	115	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	241	96	238	95	1	70-130/30
75-01-4	Vinyl chloride	ND		250	243	97	244	98	0	70-130/30
	m,p-Xylene	ND		500	421	84	424	85	1	70-130/30
95-47-6	o-Xylene	ND		250	211	84	212	85	0	70-130/30
1330-20-7	Xylene (total)	ND		750	632	84	636	85	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-5

CAS No.	Surrogate Recoveries	MS	MSD	MC28113-4	Limits
1868-53-7	Dibromofluoromethane	98%	98%	107%	70-130%
2037-26-5	Toluene-D8	99%	98%	97%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	103%	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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1046-CC1019	Injection Date:	02/10/14
Lab File ID:	V27750.D	Injection Time:	09:10
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	534127	6.57	673061	7.75	365992	11.08	392790	13.29	174682	3.52
Upper Limit [a]	1068254	7.07	1346122	8.25	731984	11.58	785580	13.79	349364	4.02
Lower Limit [b]	267064	6.07	336531	7.25	182996	10.58	196395	12.79	87341	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
MSV1046-BS	532374	6.57	670712	7.75	362322	11.08	389835	13.29	154326	3.52
MSV1046-MB	466795	6.57	615908	7.74	329845	11.08	315739	13.29	169620	3.52
MC28017-5	455638	6.57	610981	7.74	328418	11.08	313907	13.29	133955	3.52
ZZZZZZ	430203	6.56	583204	7.74	313791	11.08	299278	13.29	124140	3.51
ZZZZZZ	425262	6.57	576397	7.75	310656	11.08	296261	13.29	151734	3.52
ZZZZZZ	403947	6.57	543947	7.75	295802	11.08	301901	13.29	120098	3.52
MC28113-4	413538	6.56	556500	7.74	298292	11.08	283541	13.29	126997	3.51
MC28017-1	515114	6.57	726409	7.74	356817	11.08	326407	13.29	169382	3.53
MC28017-2	418741	6.57	580459	7.75	309312	11.08	291199	13.29	143746	3.52
ZZZZZZ	377934	6.56	521951	7.74	280002	11.08	272411	13.29	120050	3.52
MC28017-1	390529	6.56	531576	7.74	287750	11.07	276208	13.29	131548	3.51
MC28017-2	383915	6.56	547891	7.74	290220	11.07	272230	13.29	111510	3.51
MC28017-3	373133	6.56	537110	7.74	286298	11.07	269619	13.29	104618	3.51
MC28017-4	362619	6.56	528875	7.74	281831	11.07	268189	13.29	110940	3.51
MC28113-4MS	470536	6.56	590685	7.74	320293	11.07	337803	13.28	144065	3.51
MC28113-4MSD	512262	6.56	647593	7.74	347914	11.07	362663	13.28	137883	3.51
ZZZZZZ	446581	6.56	587527	7.74	312702	11.07	311950	13.28	116484	3.51
ZZZZZZ	428142	6.55	572814	7.73	308792	11.07	293263	13.28	149989	3.50
ZZZZZZ	418274	6.56	585162	7.74	309590	11.07	312283	13.28	151168	3.51

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28017-1	V27767.D	106.0	97.0	103.0
MC28017-1	V27761.D	92.0	93.0	109.0
MC28017-2	V27768.D	110.0	95.0	104.0
MC28017-2	V27762.D	105.0	95.0	105.0
MC28017-3	V27769.D	110.0	94.0	103.0
MC28017-4	V27770.D	112.0	95.0	103.0
MC28017-5	V27755.D	103.0	96.0	104.0
MC28113-4MS	V27771.D	98.0	99.0	102.0
MC28113-4MSD	V27772.D	98.0	98.0	101.0
MSV1046-BS	V27751.D	96.0	99.0	100.0
MSV1046-MB	V27754.D	101.0	97.0	104.0

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-MB	W17530.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: Method: SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.41	5.0	0.39	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-MB	W17530.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: Method: SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	36%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	15-110%
4165-60-0	Nitrobenzene-d5	86%	30-130%
321-60-8	2-Fluorobiphenyl	86%	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	

Method Blank Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36730-MB	I87201.D	1	02/03/14	KR	01/31/14	OP36730	MSI3242

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28017-1, MC28017-2, MC28017-3, MC28017-4

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.017	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	88%	30-130%
321-60-8	2-Fluorobiphenyl	77%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-BS	W17531.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	17.0	34	30-130
95-57-8	2-Chlorophenol	50	39.5	79	30-130
59-50-7	4-Chloro-3-methyl phenol	50	43.9	88	30-130
120-83-2	2,4-Dichlorophenol	50	45.9	92	30-130
105-67-9	2,4-Dimethylphenol	50	35.4	71	30-130
51-28-5	2,4-Dinitrophenol	50	36.6	73	30-130
534-52-1	4,6-Dinitro-o-cresol	50	45.8	92	30-130
95-48-7	2-Methylphenol	50	36.4	73	30-130
	3&4-Methylphenol	100	70.3	70	30-130
88-75-5	2-Nitrophenol	50	46.1	92	30-130
100-02-7	4-Nitrophenol	50	20.5	41	30-130
87-86-5	Pentachlorophenol	50	39.8	80	30-130
108-95-2	Phenol	50	18.9	38	30-130
95-95-4	2,4,5-Trichlorophenol	50	47.2	94	30-130
88-06-2	2,4,6-Trichlorophenol	50	45.9	92	30-130
62-53-3	Aniline	50	29.3	59	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.9	104	40-140
85-68-7	Butyl benzyl phthalate	50	55.0	110	40-140
100-51-6	Benzyl Alcohol	50	34.5	69	40-140
91-58-7	2-Chloronaphthalene	50	48.1	96	40-140
106-47-8	4-Chloroaniline	50	42.1	84	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	46.2	92	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.3	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	49.3	99	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	49.0	98	40-140
122-66-7	1,2-Diphenylhydrazine	50	48.3	97	40-140
121-14-2	2,4-Dinitrotoluene	50	51.4	103	40-140
606-20-2	2,6-Dinitrotoluene	50	48.1	96	40-140
91-94-1	3,3'-Dichlorobenzidine	50	52.2	104	40-140
132-64-9	Dibenzofuran	50	45.1	90	40-140
84-74-2	Di-n-butyl phthalate	50	48.3	97	40-140
117-84-0	Di-n-octyl phthalate	50	55.8	112	40-140
84-66-2	Diethyl phthalate	50	45.9	92	40-140
131-11-3	Dimethyl phthalate	50	38.1	76	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	54.8	110	40-140
118-74-1	Hexachlorobenzene	50	51.0	102	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-BS	W17531.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: Method: SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	25.4	51	40-140
67-72-1	Hexachloroethane	50	29.1	58	40-140
78-59-1	Isophorone	50	47.3	95	40-140
88-74-4	2-Nitroaniline	50	49.0	98	40-140
99-09-2	3-Nitroaniline	50	46.6	93	40-140
100-01-6	4-Nitroaniline	50	47.9	96	40-140
98-95-3	Nitrobenzene	50	45.5	91	40-140
62-75-9	n-Nitrosodimethylamine	50	27.0	54	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.2	92	40-140
86-30-6	N-Nitrosodiphenylamine	50	48.4	97	40-140
110-86-1	Pyridine	50	21.5	43	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	53%	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	89%	30-130%
321-60-8	2-Fluorobiphenyl	86%	30-130%
1718-51-0	Terphenyl-d14	104%	30-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36730-BS	I87202.D	1	02/03/14	KR	01/31/14	OP36730	MSI3242

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	43.6	87	40-140
208-96-8	Acenaphthylene	50	37.3	75	40-140
120-12-7	Anthracene	50	42.3	85	40-140
56-55-3	Benzo(a)anthracene	50	49.8	100	40-140
50-32-8	Benzo(a)pyrene	50	46.9	94	40-140
205-99-2	Benzo(b)fluoranthene	50	50.5	101	40-140
191-24-2	Benzo(g,h,i)perylene	50	53.4	107	40-140
207-08-9	Benzo(k)fluoranthene	50	47.0	94	40-140
218-01-9	Chrysene	50	47.7	95	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.7	107	40-140
206-44-0	Fluoranthene	50	47.4	95	40-140
86-73-7	Fluorene	50	44.0	88	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.7	107	40-140
90-12-0	1-Methylnaphthalene	50	39.0	78	40-140
91-57-6	2-Methylnaphthalene	50	37.9	76	40-140
85-01-8	Phenanthrene	50	42.6	85	40-140
129-00-0	Pyrene	50	46.1	92	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	89%	30-130%
321-60-8	2-Fluorobiphenyl	78%	30-130%
1718-51-0	Terphenyl-d14	93%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-MS	W17532.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
OP36729-MSD	W17533.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
MC27800-18	W17534.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: Method: SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	MC27800-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	16.6	33	15.6	31	6	30-130/20
95-57-8	2-Chlorophenol	ND		50	39.8	80	37.4	75	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	43.0	86	41.7	83	3	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	45.1	90	44.0	88	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	34.7	69	32.8	66	6	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	35.7	71	33.7	67	6	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	46.7	93	45.2	90	3	30-130/20
95-48-7	2-Methylphenol	ND		50	36.6	73	34.0	68	7	30-130/20
	3&4-Methylphenol	ND		100	70.5	71	66.4	66	6	30-130/20
88-75-5	2-Nitrophenol	ND		50	44.4	89	43.0	86	3	30-130/20
100-02-7	4-Nitrophenol	ND		50	20.3	41	19.4	39	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	41.0	82	38.5	77	6	30-130/20
108-95-2	Phenol	ND		50	19.4	39	17.5	35	10	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	45.8	92	45.1	90	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	45.3	91	43.4	87	4	30-130/20
62-53-3	Aniline	ND		50	30.8	62	27.7	55	11	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	52.8	106	48.8	98	8	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	53.3	107	51.1	102	4	40-140/20
100-51-6	Benzyl Alcohol	ND		50	34.5	69	31.1	62	10	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	46.7	93	44.0	88	6	40-140/20
106-47-8	4-Chloroaniline	ND		50	41.1	82	38.6	77	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	45.6	91	43.3	87	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	44.7	89	40.9	82	9	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	50.7	101	46.0	92	10	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	49.0	98	46.4	93	5	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	48.8	98	45.8	92	6	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	52.2	104	49.2	98	6	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	48.5	97	45.9	92	6	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	52.2	104	49.9	100	5	40-140/20
132-64-9	Dibenzofuran	ND		50	45.5	91	43.0	86	6	40-140/20
84-74-2	Di-n-butyl phthalate	1.2	J	50	49.1	96	46.7	91	5	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	54.6	109	51.3	103	6	40-140/20
84-66-2	Diethyl phthalate	ND		50	45.5	91	45.4	91	0	40-140/20
131-11-3	Dimethyl phthalate	ND		50	38.1	76	40.8	82	7	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	2.7		50	53.8	102	51.5	98	4	40-140/20
118-74-1	Hexachlorobenzene	ND		50	51.3	103	48.7	97	5	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36729-MS	W17532.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
OP36729-MSD	W17533.D	1	02/03/14	KR	01/31/14	OP36729	MSW770
MC27800-18	W17534.D	1	02/03/14	KR	01/31/14	OP36729	MSW770

The QC reported here applies to the following samples: Method: SW846 8270D

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	MC27800-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	23.9	48	22.0	44	8	40-140/20
67-72-1	Hexachloroethane	ND		50	30.5	61	25.2	50	19	40-140/20
78-59-1	Isophorone	ND		50	45.9	92	44.1	88	4	40-140/20
88-74-4	2-Nitroaniline	ND		50	48.0	96	46.3	93	4	40-140/20
99-09-2	3-Nitroaniline	ND		50	45.9	92	45.2	90	2	40-140/20
100-01-6	4-Nitroaniline	ND		50	47.2	94	44.4	89	6	40-140/20
98-95-3	Nitrobenzene	ND		50	44.6	89	42.5	85	5	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	28.4	57	26.1	52	8	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	47.5	95	44.3	89	7	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	47.9	96	45.5	91	5	40-140/20
110-86-1	Pyridine	ND		50	22.6	45	20.3	41	11	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-18	Limits
367-12-4	2-Fluorophenol	55%	50%	49%	15-110%
4165-62-2	Phenol-d5	38%	35%	36%	15-110%
118-79-6	2,4,6-Tribromophenol	101%	97%	88%	15-110%
4165-60-0	Nitrobenzene-d5	86%	82%	84%	30-130%
321-60-8	2-Fluorobiphenyl	83%	78%	80%	30-130%
1718-51-0	Terphenyl-d14	100%	96%	99%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36730-MS	I87203.D	1	02/03/14	KR	01/31/14	OP36730	MSI3242
OP36730-MSD	I87204.D	1	02/03/14	KR	01/31/14	OP36730	MSI3242
MC27800-19	I87205.D	1	02/03/14	KR	01/31/14	OP36730	MSI3242

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28017-1, MC28017-2, MC28017-3, MC28017-4

CAS No.	Compound	MC27800-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	43.8	88	40.9	82	7	40-140/20
208-96-8	Acenaphthylene	ND		50	36.9	74	34.7	69	6	40-140/20
120-12-7	Anthracene	ND		50	42.2	84	40.2	80	5	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	49.7	99	46.9	94	6	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	46.9	94	44.1	88	6	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	50.9	102	45.3	91	12	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	53.4	107	50.6	101	5	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	46.7	93	47.5	95	2	40-140/20
218-01-9	Chrysene	ND		50	47.0	94	44.6	89	5	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	53.7	107	51.0	102	5	40-140/20
206-44-0	Fluoranthene	ND		50	46.6	93	43.9	88	6	40-140/20
86-73-7	Fluorene	ND		50	43.5	87	41.2	82	5	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	53.7	107	50.8	102	6	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	38.4	77	35.7	71	7	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	37.4	75	35.2	70	6	40-140/20
85-01-8	Phenanthrene	0.029	J	50	42.6	85	40.7	81	5	40-140/20
129-00-0	Pyrene	ND		50	45.9	92	43.3	87	6	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC27800-19	Limits
4165-60-0	Nitrobenzene-d5	88%	84%	87%	30-130%
321-60-8	2-Fluorobiphenyl	76%	71%	74%	30-130%
1718-51-0	Terphenyl-d14	92%	88%	90%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3242-CC3238	Injection Date:	02/03/14
Lab File ID:	I87200.D	Injection Time:	08:32
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	383295	4.43	855826	5.49	465195	7.04	761744	8.47	468080	11.24	1265735	12.75
Upper Limit [a]	766590	4.93	1711652	5.99	930390	7.54	1523488	8.97	936160	11.74	2531470	13.25
Lower Limit [b]	191648	3.93	427913	4.99	232598	6.54	380872	7.97	234040	10.74	632868	12.25
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
OP36730-MB	393487	4.43	874710	5.49	469362	7.04	761268	8.47	464526	11.24	1257869	12.75
OP36730-BS	372056	4.43	840889	5.49	454457	7.04	742642	8.47	464902	11.24	1220586	12.75
OP36730-MS	384831	4.43	855785	5.49	462917	7.04	752809	8.47	466599	11.24	1208402	12.75
OP36730-MSD	369921	4.43	823718	5.49	445524	7.04	716285	8.47	449543	11.24	1163387	12.75
MC27800-19	366129	4.43	807134	5.49	432032	7.04	705553	8.47	434973	11.24	1145719	12.75
OP36724-MB	385732	4.43	847563	5.49	459004	7.04	741841	8.47	463108	11.24	1230630	12.75
OP36724-BS	368575	4.43	817759	5.49	443003	7.04	720405	8.47	453458	11.24	1193314	12.75
OP36724-MS	355324	4.43	789869	5.49	427121	7.04	703005	8.47	437656	11.24	1144165	12.75
OP36724-MSD	334266	4.43	737097	5.49	400425	7.04	648838	8.47	406843	11.24	1071027	12.75
MC27800-17	367999	4.43	810907	5.49	441816	7.04	719379	8.47	454366	11.23	1193210	12.75
ZZZZZZ	392457	4.43	859441	5.49	465811	7.04	749761	8.47	463790	11.24	1214487	12.75
ZZZZZZ	383106	4.43	844515	5.49	462162	7.04	747966	8.47	460642	11.24	1233432	12.75
OP36743-MB	367554	4.43	809068	5.49	439460	7.04	714498	8.47	444675	11.24	1162321	12.75
OP36743-BS	366379	4.43	816311	5.49	447397	7.04	723348	8.47	457639	11.24	1200711	12.75

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3243-CC3238	Injection Date:	02/03/14
Lab File ID:	I87219.D	Injection Time:	15:45
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	378480	4.43	832150	5.49	450648	7.04	743641	8.47	463074	11.24	1211272	12.75
Upper Limit [a]	756960	4.93	1664300	5.99	901296	7.54	1487282	8.97	926148	11.74	2422544	13.25
Lower Limit [b]	189240	3.93	416075	4.99	225324	6.54	371821	7.97	231537	10.74	605636	12.25

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	364320	4.43	805525	5.49	435539	7.04	706301	8.47	435091	11.24	1164374	12.75
ZZZZZZ	408162	4.43	895323	5.49	478618	7.04	780288	8.47	485276	11.24	1281777	12.75
ZZZZZZ	372089	4.43	824504	5.49	446526	7.04	722742	8.47	453700	11.24	1195088	12.74
ZZZZZZ	389479	4.43	867279	5.49	469075	7.04	763700	8.47	476395	11.24	1262872	12.75
ZZZZZZ	377007	4.43	835236	5.49	453010	7.04	742875	8.47	462032	11.24	1227391	12.75
ZZZZZZ	368407	4.43	815196	5.49	442748	7.04	718918	8.47	453150	11.24	1194723	12.75
ZZZZZZ	335702	4.43	731700	5.49	397281	7.04	652031	8.47	409866	11.24	1080336	12.74
ZZZZZZ	360597	4.43	794369	5.49	429335	7.04	699691	8.47	436301	11.24	1156010	12.74
ZZZZZZ	343343	4.43	761468	5.49	405429	7.04	671615	8.47	420903	11.24	1121586	12.74
ZZZZZZ	362052	4.43	792701	5.49	428866	7.04	695893	8.47	422734	11.24	1117929	12.75
ZZZZZZ	339763	4.43	748234	5.49	406893	7.03	670695	8.47	418597	11.23	1112505	12.74
ZZZZZZ	353596	4.43	784069	5.49	428567	7.04	694274	8.47	435024	11.24	1156653	12.75
ZZZZZZ	366664	4.43	809202	5.49	439157	7.04	717632	8.47	453676	11.23	1180204	12.74
ZZZZZZ	350558	4.43	770757	5.49	419289	7.04	686401	8.47	427248	11.24	1140270	12.74
ZZZZZZ	381099	4.43	835822	5.49	456993	7.04	745145	8.47	473307	11.23	1246093	12.75
ZZZZZZ	346672	4.43	767525	5.49	415432	7.04	675577	8.47	427517	11.24	1119263	12.74
MC28017-1	377654	4.43	831818	5.49	449607	7.04	741670	8.47	470781	11.24	1215770	12.75
MC28017-2	373424	4.43	823997	5.49	442410	7.04	726371	8.47	450913	11.24	1175996	12.75
MC28017-3	370778	4.43	811063	5.49	433805	7.04	703396	8.47	436862	11.24	1129852	12.75
MC28017-4	366793	4.43	801865	5.49	427373	7.04	687688	8.47	432725	11.24	1120021	12.75
ZZZZZZ	354455	4.43	782425	5.49	422772	7.04	688064	8.47	435298	11.24	1139543	12.74
ZZZZZZ	327695	4.44	693797	5.49	377252	7.04	622488	8.47	396187	11.24	1049446	12.74
ZZZZZZ	334440	4.43	732277	5.49	393745	7.04	653091	8.47	417357	11.24	1081811	12.75
ZZZZZZ	357062	4.43	766743	5.49	413870	7.04	676557	8.47	432862	11.24	1122854	12.75
ZZZZZZ	375272	4.44	790432	5.50	433716	7.04	718080	8.47	458081	11.24	1181055	12.75
ZZZZZZ	330280	4.43	721611	5.49	387100	7.04	634368	8.47	407602	11.23	1064051	12.74
OP36732-MB	385760	4.43	859916	5.49	467448	7.04	760207	8.47	479930	11.24	1217608	12.75
ZZZZZZ	382940	4.43	842686	5.49	456938	7.04	749210	8.47	475655	11.24	1216815	12.75
ZZZZZZ	374532	4.43	823964	5.49	443317	7.04	725860	8.47	453496	11.24	1143024	12.74
ZZZZZZ	385129	4.43	858047	5.48	462237	7.04	756320	8.47	478849	11.24	1222451	12.75
ZZZZZZ	371885	4.43	821436	5.49	442747	7.04	722814	8.47	458250	11.24	1180339	12.75
ZZZZZZ	385939	4.43	845466	5.49	450702	7.04	737727	8.47	464089	11.24	1186927	12.75
ZZZZZZ	331939	4.43	751368	5.49	371838	7.04	679858	8.47	439101	11.24	1164677	12.75
ZZZZZZ	328461	4.43	742375	5.49	371175	7.04	670258	8.46	426175	11.24	1127881	12.75
ZZZZZZ	300560	4.43	679374	5.49	342452	7.04	617108	8.46	394912	11.23	1055853	12.74

Semivolatile Internal Standard Area Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3243-CC3238	Injection Date:	02/03/14
Lab File ID:	I87219.D	Injection Time:	15:45
Instrument ID:	GCMSI	Method:	SW846 8270D BY SIM

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	343300	4.43	776067	5.49	391667	7.04	703102	8.47	460059	11.23	1216652	12.74
ZZZZZZ	313774	4.43	707531	5.49	355887	7.04	639613	8.47	409243	11.23	1088411	12.74
ZZZZZZ	307275	4.43	690666	5.49	348349	7.04	624168	8.47	408222	11.23	1089661	12.74
ZZZZZZ	343796	4.43	760736	5.48	411033	7.04	665947	8.47	425676	11.24	1102991	12.74
ZZZZZZ	344681	4.43	761424	5.49	415145	7.03	672271	8.46	422334	11.24	1086671	12.74
ZZZZZZ	380132	4.43	846702	5.49	454178	7.04	741605	8.47	468129	11.24	1188011	12.74
ZZZZZZ	333709	4.43	734853	5.49	399723	7.04	650744	8.46	417804	11.23	1070659	12.74
ZZZZZZ	348429	4.43	765264	5.49	414676	7.04	670602	8.47	422869	11.23	1084923	12.74
ZZZZZZ	360181	4.43	792413	5.49	427881	7.04	699747	8.47	444968	11.24	1146945	12.74
ZZZZZZ	333114	4.43	724932	5.48	392413	7.04	646171	8.46	406966	11.23	1043672	12.74

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW770-CC768	Injection Date:	02/03/14
Lab File ID:	W17529.D	Injection Time:	10:56
Instrument ID:	GCMSW	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	161148	4.41	592055	5.48	400551	7.02	689822	8.32	692260	11.01	644196	12.77
Upper Limit [a]	322296	4.91	1184110	5.98	801102	7.52	1379644	8.82	1384520	11.51	1288392	13.27
Lower Limit [b]	80574	3.91	296028	4.98	200276	6.52	344911	7.82	346130	10.51	322098	12.27
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**
OP36729-MB	166021	4.41	606871	5.48	401699	7.02	685307	8.32	714908	11.00	665142	12.76
OP36729-BS	174184	4.41	625213	5.48	422903	7.02	734412	8.32	725250	11.01	672223	12.77
OP36729-MS	160593	4.41	597426	5.48	401625	7.02	683984	8.32	700589	11.01	649437	12.77
OP36729-MSD	159546	4.41	577104	5.48	387637	7.02	666214	8.32	673122	11.01	627699	12.77
MC27800-18	153249	4.41	568389	5.48	378875	7.02	639589	8.32	649658	11.00	610566	12.76
OP36742-MB	149989	4.41	563331	5.48	374876	7.02	630099	8.32	659719	11.00	622685	12.76
OP36742-BS	154278	4.41	572858	5.48	380795	7.02	664596	8.32	671211	11.01	630372	12.77
ZZZZZZ	298855	4.41	1103458	5.48	731910	7.02	1277417	8.32	1324373	11.01	1274744	12.77
ZZZZZZ	157378	4.41	592502	5.48	382573	7.02	653253	8.32	696269	11.00	645880	12.77
ZZZZZZ	156558	4.41	583095	5.48	386721	7.02	673418	8.32	697642	11.00	659985	12.76
ZZZZZZ	162664	4.41	605347	5.48	401556	7.02	683309	8.32	698574	11.00	659945	12.76
ZZZZZZ	168116	4.41	636536	5.48	415881	7.02	703586	8.32	700551	11.00	660828	12.76
MC28017-1	169860	4.41	631593	5.48	412966	7.02	712538	8.32	740289	11.00	697513	12.77
MC28017-2	163351	4.41	591831	5.48	388285	7.02	657233	8.32	689640	11.00	644562	12.76
MC28017-3	165045	4.41	621049	5.48	395135	7.02	660797	8.32	657899	11.00	618357	12.76
MC28017-4	153375	4.41	585477	5.48	377541	7.02	634532	8.32	647214	11.00	619289	12.76
ZZZZZZ	I55887	4.41	602745	5.48	402066	7.02	675424	8.32	688707	11.00	645374	12.76
ZZZZZZ	160145	4.41	586567	5.48	390319	7.02	680955	8.32	690421	11.00	654784	12.76
ZZZZZZ	161612	4.41	603124	5.48	397052	7.02	682943	8.32	723647	11.00	689687	12.76
ZZZZZZ	162948	4.41	618809	5.48	406434	7.02	692120	8.32	735149	11.00	692588	12.76

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW773-CC768	Injection Date:	02/06/14
Lab File ID:	W17583.D	Injection Time:	08:46
Instrument ID:	GCMSW	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	152221	4.40	578070	5.47	391139	7.01	682371	8.30	693228	10.98	644382	12.75
Upper Limit [a]	304442	4.90	1156140	5.97	782278	7.51	1364742	8.80	1386456	11.48	1288764	13.25
Lower Limit [b]	76111	3.90	289035	4.97	195570	6.51	341186	7.80	346614	10.48	322191	12.25
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
OP36764-MB	148920	4.40	553614	5.46	368353	7.01	632288	8.30	637213	10.98	602037	12.74
OP36764-BS	151388	4.40	566012	5.47	374467	7.01	656457	8.30	650747	10.98	605695	12.74
OP36764-BSD	158027	4.40	591462	5.47	398804	7.01	692288	8.30	698617	10.98	650388	12.74
OP36764-MS	153462	4.40	566397	5.47	380579	7.01	665505	8.30	665871	10.98	614986	12.74
OP36764-MSD	151544	4.40	566226	5.47	372176	7.01	645864	8.30	651930	10.98	598271	12.74
MC28000-10	147714	4.40	561598	5.46	370965	7.01	644265	8.30	641695	10.98	599472	12.74
ZZZZZZ	141066	4.40	526014	5.46	362783	7.01	620234	8.30	658815	10.98	622690	12.74
ZZZZZZ	149436	4.40	570730	5.46	375793	7.01	630026	8.30	645626	10.98	609553	12.74
ZZZZZZ	137349	4.40	504077	5.46	341558	7.01	599838	8.30	616655	10.98	571381	12.74
ZZZZZZ	147643	4.40	561437	5.46	372759	7.01	659488	8.30	646820	10.98	609966	12.74
ZZZZZZ	149950	4.40	561123	5.46	376533	7.01	653524	8.30	662391	10.98	616264	12.74
OP36772-BS	182159	4.40	672684	5.47	445367	7.01	756863	8.30	736531	10.98	648404	12.74
OP36763-MB	157511	4.40	581740	5.46	386468	7.01	669647	8.30	670121	10.98	623055	12.74
OP36763-BS	174362	4.40	642085	5.47	423653	7.01	728797	8.30	721375	10.98	677350	12.74
ZZZZZZ	175346	4.40	649676	5.46	417406	7.01	640873	8.30	571497	10.99	529967	12.76
ZZZZZZ	144396	4.40	543612	5.47	339231	7.01	509224	8.31	433956	11.02	429318	12.79
OP36763-MS	146596	4.40	558516	5.47	372186	7.01	620549	8.30	571765	10.99	542626	12.75
OP36763-MSD	135053	4.40	515769	5.47	345638	7.01	594133	8.30	576291	10.98	527797	12.75
MC28000-9	136366	4.40	510973	5.46	343039	7.01	580894	8.30	567857	10.98	531485	12.74
ZZZZZZ	148372	4.40	557875	5.46	364219	7.01	607267	8.30	604418	10.98	572323	12.75
ZZZZZZ	150763	4.40	564688	5.47	373160	7.01	621277	8.30	617095	10.98	583580	12.74
OP36772-MB	158105	4.40	588606	5.46	393937	7.01	670764	8.30	620343	10.98	552899	12.74
MC28017-1 [c]	193077	4.40	708602	5.47	476083	7.01	801214	8.30	814670	10.98	740403	12.75

IS I = 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) Confirmation run for surrogate recoveries.

Semivolatile Surrogate Recovery Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28017-1	W17607.D	16.0	12.0* [a]	58.0	79.0	74.0	95.0
MC28017-1	W17542.D	16.0	13.0* [a]	57.0	78.0	74.0	94.0
MC28017-2	W17543.D	37.0	28.0	87.0	68.0	68.0	91.0
MC28017-3	W17544.D	47.0	35.0	99.0	75.0	73.0	95.0
MC28017-4	W17545.D	43.0	33.0	95.0	69.0	68.0	94.0
OP36729-BS	W17531.D	53.0	37.0	99.0	89.0	86.0	104.0
OP36729-MB	W17530.D	47.0	36.0	88.0	86.0	86.0	101.0
OP36729-MS	W17532.D	55.0	38.0	101.0	86.0	83.0	100.0
OP36729-MSD	W17533.D	50.0	35.0	97.0	82.0	78.0	96.0

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 re-extraction/reanalysis.

Semivolatile Surrogate Recovery Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28017-1	I87238.D	81.0	68.0	89.0
MC28017-2	I87239.D	70.0	63.0	89.0
MC28017-3	I87240.D	77.0	67.0	91.0
MC28017-4	I87241.D	72.0	63.0	90.0
OP36730-BS	I87202.D	89.0	78.0	93.0
OP36730-MB	I87201.D	88.0	77.0	93.0
OP36730-MS	I87203.D	88.0	76.0	92.0
OP36730-MSD	I87204.D	84.0	71.0	88.0

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

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-MB	BK34501.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: Method: SW846 8011

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	92%	36-173%
460-00-4	Bromofluorobenzene (S)	92%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-BS	BK34502.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: Method: SW846 8011

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.091	128	60-140
106-93-4	1,2-Dibromoethane	0.071	0.072	101	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	116%	36-173%
460-00-4	Bromofluorobenzene (S)	116%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-MS	BK34503.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
OP36754-MSD	BK34504.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
MC28000-5	BK34505.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: Method: SW846 8011

MC28017-1, MC28017-2, MC28017-3, MC28017-4, MC28017-6

CAS No.	Compound	MC28000-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.087	123	0.095	134	9	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.065	92	0.069	97	6	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-5	Limits
460-00-4	Bromofluorobenzene (S)	110%	117%	85%	36-173%
460-00-4	Bromofluorobenzene (S)	115%	118%	95%	36-173%

8.3.4

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC28017-1	BK34508.D	121.0	127.0
MC28017-2	BK34509.D	89.0	103.0
MC28017-3	BK34510.D	96.0	124.0
MC28017-4	BK34512.D	115.0	132.0
MC28017-6	BK34513.D	113.0	104.0
OP36754-BS	BK34502.D	116.0	116.0
OP36754-MB	BK34501.D	92.0	92.0
OP36754-MS	BK34503.D	110.0	115.0
OP36754-MSD	BK34504.D	117.0	118.0

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: MC28017
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1140-CC1140	Injection Date:	02/04/14
Lab File ID:	BK34511.D	Injection Time:	14:38
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.33	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC28017-4	BK34512.D	02/04/14	15:01	4.33	4.39
MC28017-6	BK34513.D	02/04/14	15:24	4.33	4.39
ZZZZZZ	BK34514.D	02/04/14	15:47	4.33	4.40
ZZZZZZ	BK34515.D	02/04/14	16:10	4.33	4.39
GBK1140-ECC114	BK34516.D	02/04/14	16:32	4.33	4.39

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC28046

Data Reviewer: Darcy Chase

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 2/27/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P93D-ROX-013114	TB-ROX-013114-HCL
TB-ROX-013114-ST	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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, the PAH compound, phenanthrene was detected in the method blank. VOC and SVOC LCS recoveries were outside evaluation criteria. These issues are addressed further in the appropriate sections below. Additionally, the continuing calibration standard for 2-chloroethyl vinyl ether exceeded 40 percent difference (%D). Also, the initial calibration verification for acrolein and 2-chloroethyl vinyl ether exceeded 30%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
OP36750-MB	PAHs	Phenanthrene	0.017 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 required qualification.

Sample ID	Parameter	Analyte	New Reporting Limit (RL)	Qualification
P93D-ROX-013114	PAHs	Phenanthrene	-	**U**

5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	LCS Criteria
MSV1046-BS	VOCs	Chloroethane	**136**	70-130
OP36776-BS	SVOCs	Hexachlorocyclopentadiene	**39**	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.

Sample ID	Parameter	Analyte	Qualification
P93D-ROX-013114	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; samples analyzed did not require dilution.

12.0 Additional Qualifications

Were additional qualifications applied?

No

New England ACCUTEST LABORATORIES

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC28046

Sampling Date: 01/31/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Reviewed on 2/27/14 DKC

Total number of pages in report: 57

NELAP ACCREDITED TNI LABORATORY

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.

Reza Tand
Lab Director

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Sample Summary

Shell Oil

Job No: MC28046

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC28046-1	01/31/14	15:10	DMMM	02/01/14	AQ	Ground Water	P93D-ROX-013114
MC28046-2	01/31/14	00:00	DMMM	02/01/14	AQ	Trip Blauk Water	TB-ROX-013114-HCL
MC28046-3	01/31/14	00:00	DMMM	02/01/14	AQ	Trip Blank Water	TB-ROX-013114-ST

ACCUTEST LABORATORIES

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Shell Oil **Job No** MC28046

Site: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central **Report Date** 2/13/2014 11:40:50 AM

1 Sample(s) and 2 Trip Blank(s) were collected on 01/31/2014 and were received at Accutest on 02/01/2014 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of MC28046. 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)aeridine, 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:** MSV1046

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28113-4MS, MC28113-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Blank Spike Recovery(s) for Chloroethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, Acetone are outside control limits. Outside control limits due to possible matrix interferenee. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 2-Hexanone, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration standard MSV1046-CC1019 for 2-chloroethyl vinyl ether exceed 40% Difference (response biased high). Associated samples are non-detect for these compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP36776

- 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) MC28000-11MS, MC28000-11MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Blank Spike meets program technical requirement.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ **Batch ID:** OP36750

- 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) MC28000-4MS, MC28000-4MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8011

Matrix AQ	Batch ID: OP36754

- 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) MC28000-5MS, MC28000-5MSD 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(MC28046).

Summary of Hits

Job Number: MC28046
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 01/31/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC28046-1	**P93D-ROX-013114**					
Benzene		1.2	0.50	0.45	ug/l	SW846 8260C
Chlorobenzene		0.62 J	1.0	0.48	ug/l	SW846 8260C
1,2-Dichloropropane		4.4	2.0	0.45	ug/l	SW846 8260C
Methyl Tert Butyl Ether		1.1	1.0	0.43	ug/l	SW846 8260C
bis(2-Ethylhexyl)phthalate		4.5	2.1	0.52	ug/l	SW846 8270D
Phenanthrene		0.024 JB	0.053	0.013	ug/l	SW846 8270D BY SIM
MC28046-2	**TB-ROX-013114-HCL**					
No hits reported in this sample.						
MC28046-3	**TB-ROX-013114-ST**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27774.D	1	02/10/14	AMY	n/a	n/a	MSV1046
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	1.2	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	0.62	1.0	0.48	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dihromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	4.4	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.1	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	97%		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	

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:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F71524.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.62	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.61	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.68	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.91	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.98	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.72	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxaua 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	4.5	2.1	0.52	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND UJ	11	2.7	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.47	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.86	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.58	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	21%		15-110%
4165-62-2	Phenol-d5	15%		15-110%
118-79-6	2,4,6-Tribromophenol	63%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	70%		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:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87296.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244
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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.079	ug/l	
85-01-8	Phenanthrene	~~0.024~~ N	0.053	0.013	ug/l	JB N
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	58%		30-130%
321-60-8	2-Fluorobiphenyl	49%		30-130%
1718-51-0	Terpheuyl-d14	71%		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:	P93D-ROX-013114		
Lab Sample ID:	MC28046-1	**Date Sampled:**	01/31/14
Matrix:	AQ - Ground Water	**Date Received:**	02/01/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34514.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		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

Report of Analysis

Client Sample ID:	TB-ROX-013114-HCL		
Lab Sample ID:	MC28046-2	**Date Sampled:**	01/31/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27756.D	1	02/10/14	AMY	n/a	n/a	MSV1046
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-013114-HCL		
Lab Sample ID:	MC28046-2	**Date Sampled:**	01/31/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene cbloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzeue	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-013114-HCL		
Lab Sample ID:	MC28046-2	**Date Sampled:**	01/31/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/01/14
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	96%		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	

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-013114-ST		
Lab Sample ID:	MC28046-3	**Date Sampled:**	01/31/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/01/14
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK34515.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
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	0.0052	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		36-173%
460-00-4	Bromofluorobenzene (S)	106%		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

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 Labs: 405 Technology Ctr 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 SUBCH ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Bilman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 8 4 0

SAP #: 3 4 0 0 8 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE 1/31/14

PAGE 1 of 1

COMPANY: URS CORPORATION

COLLECTOR:

SITE ADDRESS: Street and City: 900 South Central Ave, ROXANA

State: IL

ZIP DELIVERABLE TO (Name, Company, Office Location):

PHONE #:

NAME:

CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21562973.03001

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

PROJECT CONTACT (Name, Company, Office Location): Elizabeth Kunkel, Wendy Pennington, Bob Bilman

TELEPHONE: 314-429-0100

FAX: 314-429-0462

INTERCONNECT MAIL: bob.bilman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

COMPLETED BY: DMattingly, M Mansker

LAB USE ONLY: mc28046

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 REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEGO DISK

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

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 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P93D-ROX-013114	1/31/14	1510	water	2			2	2	6	X	X	X	X	0	
-2	TB-ROX-013114-HCl	↓	0000	↓	2					2	X				↓	
-3	TB-ROX-013114-ST	↓	0000	↓					2	2		X			↓	

19D, 4E1,

2.1°

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	1/31/14	1700
FX	[signature]	2/1/14	10115

MC28046: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC28046 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 2/1/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28046

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28046-1 Collected: 31-JAN-14 15:10 By: DMMM Received: 01-FEB-14 By: P93D-ROX-013114						
MC28046-1	SW846 8011	04-FEB-14 15:47	NK	03-FEB-14	AZ	V8011SL
MC28046-1	SW846 8270D BY SIM	04-FEB-14 21:10	MR	03-FEB-14	AJ	B8270SIMSL
MC28046-1	SW846 8260C	10-FEB-14 19:45	AMY			V8260SL+
MC28046-1	SW846 8270D	11-FEB-14 15:16	WK	06-FEB-14	TA	AB8270SL+
MC28046-2 Collected: 31-JAN-14 00:00 By: DMMM Received: 01-FEB-14 By: TB-ROX-013114-HCL						
MC28046-2	SW846 8260C	10-FEB-14 11:49	AMY			V8260SL+
MC28046-3 Collected: 31-JAN-14 00:00 By: DMMM Received: 01-FEB-14 By: TB-ROX-013114-ST						
MC28046-3	SW846 8011	04-FEB-14 16:10	NK	03-FEB-14	AZ	V8011SL

Accutest Internal Chain of Custody

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 02/01/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28046-1.1	Walk In Ref #22	Aysia Wood	02/03/14 14:28	Retrieve from Storage
MC28046-1.1	Aysia Wood	Walk In Ref #22	02/03/14 21:35	Return to Storage
MC28046-1.2	Walk In Ref #22	Thomas Abruzzise	02/06/14 15:47	Retrieve from Storage
MC28046-1.4	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28046-1.4	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28046-1.4	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28046-1.4	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28046-1.5	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage
MC28046-2.1	VOC Ref #4	Amy Min Yang	02/10/14 10:33	Retrieve from Storage
MC28046-2.1	Amy Min Yang	GCMSV	02/10/14 10:33	Load on Instrument
MC28046-2.1	GCMSV	Amy Min Yang	02/10/14 16:57	Unload from Instrument
MC28046-2.1	Amy Min Yang	VOC Ref #4	02/10/14 16:57	Return to Storage
MC28046-3.2	VOC Ref #4	Marc Tahtamoni	02/03/14 19:19	Retrieve from Storage

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzeue	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

6.1.1

Method Blank Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-MB	V27754.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	70-130%
2037-26-5	Toluene-D8	97%	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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	38.2	76	70-130
107-02-8	Acrolein	50	53.6	107	70-130
107-13-1	Acrylonitrile	100	76.6	77	70-130
71-43-2	Benzene	50	49.9	100	70-130
108-86-1	Bromobenzene	50	53.3	107	70-130
74-97-5	Bromochloromethane	50	49.8	100	70-130
75-27-4	Bromodichloromethane	50	55.1	110	70-130
75-25-2	Bromoform	50	43.4	87	70-130
74-83-9	Bromomethane	50	56.1	112	70-130
78-93-3	2-Butanone (MEK)	50	39.7	79	70-130
104-51-8	n-Butylbenzene	50	56.8	114	70-130
135-98-8	sec-Butylbenzene	50	58.5	117	70-130
98-06-6	tert-Butylbenzene	50	57.7	115	70-130
75-15-0	Carbon disulfide	50	41.6	83	70-130
56-23-5	Carbon tetrachloride	50	54.5	109	70-130
108-90-7	Chlorobenzene	50	45.7	91	70-130
75-00-3	Chloroethane	50	68.1	136* [a]	70-130
110-75-8	2-Chloroethyl vinyl ether	50	48.1	96	70-130
67-66-3	Chloroform	50	48.8	98	70-130
74-87-3	Chloromethane	50	54.2	108	70-130
95-49-8	o-Chlorotoluene	50	52.5	105	70-130
106-43-4	p-Chlorotoluene	50	54.2	108	70-130
124-48-1	Dibromochloromethane	50	56.2	112	70-130
95-50-1	1,2-Dichlorobenzene	50	49.2	98	70-130
541-73-1	1,3-Dichlorobenzene	50	50.2	100	70-130
106-46-7	1,4-Dichlorobenzene	50	49.7	99	70-130
75-71-8	Dichlorodifluoromethane	50	50.5	101	70-130
75-34-3	1,1-Dichloroethane	50	49.7	99	70-130
107-06-2	1,2-Dichloroethane	50	50.3	101	70-130
75-35-4	1,1-Dichloroethene	50	48.1	96	70-130
156-59-2	cis-1,2-Dichloroethene	50	50.4	101	70-130
156-60-5	trans-1,2-Dichloroethene	50	48.6	97	70-130
78-87-5	1,2-Dichloropropane	50	49.3	99	70-130
142-28-9	1,3-Dichloropropane	50	48.9	98	70-130
594-20-7	2,2-Dichloropropane	50	60.2	120	70-130
563-58-6	1,1-Dichloropropene	50	50.2	100	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	47.4	95	70-130
10061-02-6	trans-1,3-Dichloropropene	50	49.7	99	70-130
123-91-1	1,4-Dioxane	250	202	81	70-130
97-63-2	Ethyl methacrylate	50	45.3	91	77-137
100-41-4	Ethylbenzene	50	52.9	106	70-130
87-68-3	Hexachlorobutadiene	50	57.5	115	70-130
591-78-6	2-Hexanone	50	40.7	81	70-130
98-82-8	Isopropylbenzene	50	59.3	119	70-130
99-87-6	p-Isopropyltoluene	50	56.7	113	70-130
1634-04-4	Methyl Tert Butyl Ether	50	53.0	106	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.7	99	70-130
74-95-3	Methylene bromide	50	49.0	98	70-130
75-09-2	Methylene chloride	50	44.9	90	70-130
91-20-3	Naphthalene	50	50.4	101	70-130
103-65-1	n-Propylbenzene	50	56.5	113	70-130
100-42-5	Styrene	50	48.5	97	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	52.9	106	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.3	101	70-130
127-18-4	Tetrachloroethene	50	52.1	104	70-130
108-88-3	Toluene	50	53.7	107	70-130
87-61-6	1,2,3-Trichlorobenzene	50	57.8	116	70-130
120-82-1	1,2,4-Trichlorobenzene	50	59.8	120	70-130
71-55-6	1,1,1-Trichloroethane	50	54.8	110	70-130
79-00-5	1,1,2-Trichloroethane	50	49.2	98	70-130
79-01-6	Trichloroethene	50	51.7	103	70-130
75-69-4	Trichlorofluoromethane	50	62.4	125	70-130
96-18-4	1,2,3-Trichloropropane	50	53.7	107	70-130
95-63-6	1,2,4-Trimethylbenzene	50	57.4	115	70-130
108-67-8	1,3,5-Trimethylbenzene	50	58.3	117	70-130
108-05-4	Vinyl Acetate	50	49.5	99	70-130
75-01-4	Vinyl chloride	50	54.2	108	70-130
	m,p-Xylene	100	88.0	88	70-130
95-47-6	o-Xylene	50	44.5	89	70-130
1330-20-7	Xylene (total)	150	132	88	70-130

* = Outside of Control Limits.

6.2.1

Blank Spike Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1046-BS	V27751.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

6.2.1

6

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	MC28113-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	142	57* [a]	124	50* [a]	14	70-130/30
107-02-8	Acrolein	ND		250	230	92	217	87	6	70-130/30
107-13-1	Acrylonitrile	ND		500	401	80	374	75	7	70-130/30
71-43-2	Benzene	ND		250	237	95	237	95	0	70-130/30
108-86-1	Bromobenzene	ND		250	256	102	260	104	2	70-130/30
74-97-5	Bromochloromethane	ND		250	235	94	237	95	1	70-130/30
75-27-4	Bromodichloromethane	ND		250	263	105	260	104	1	70-130/30
75-25-2	Bromoform	ND		250	207	83	201	80	3	70-130/30
74-83-9	Bromomethane	ND		250	244	98	250	100	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	163	65* [a]	150	60* [a]	8	70-130/30
104-51-8	n-Butylbenzene	ND		250	279	112	284	114	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	287	115	290	116	1	70-130/30
98-06-6	tert-Butylbenzene	ND		250	283	113	290	116	2	70-130/30
75-15-0	Carbon disulfide	ND		250	198	79	201	80	2	70-130/30
56-23-5	Carbon tetrachloride	ND		250	276	110	269	108	3	70-130/30
108-90-7	Chlorobenzene	ND		250	217	87	219	88	1	70-130/30
75-00-3	Chloroethane	ND		250	301	120	300	120	0	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* [a]	ND	0* [a]	nc	70-130/30
67-66-3	Chloroform	ND		250	237	95	236	94	0	70-130/30
74-87-3	Chloromethane	ND		250	282	113	253	101	11	70-130/30
95-49-8	o-Chlorotoluene	ND		250	257	103	260	104	1	70-130/30
106-43-4	p-Chlorotoluene	ND		250	263	105	267	107	2	70-130/30
124-48-1	Dibromochloromethane	ND		250	269	108	264	106	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	234	94	238	95	2	70-130/30
541-73-1	1,3-Dichlorohenzene	ND		250	238	95	246	98	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	240	96	241	96	0	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	270	108	270	108	0	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	241	96	241	96	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	252	101	245	98	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	233	93	235	94	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	234	94	239	96	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	230	92	232	93	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	236	94	237	95	0	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	238	95	234	94	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	277	111	277	111	0	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	243	97	242	97	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Compound	MC28113-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	214	86	217	87	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	234	94	231	92	1	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1030	82	1000	80	3	70-130/30
97-63-2	Ethyl methacrylate	ND		250	217	87	209	84	4	72-139/30
100-41-4	Ethylbenzene	ND		250	252	101	253	101	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	273	109	294	118	7	70-130/30
591-78-6	2-Hexanone	ND		250	181	72	165	66* [a]	9	70-130/30
98-82-8	Isopropylbenzene	ND		250	290	116	293	117	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	275	110	282	113	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	4.5		250	256	101	244	96	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	250	100	230	92	8	70-130/30
74-95-3	Methylene bromide	ND		250	239	96	234	94	2	70-130/30
75-09-2	Methylene chloride	ND		250	215	86	218	87	1	70-130/30
91-20-3	Naphthalene	ND		250	223	89	235	94	5	70-130/30
103-65-1	n-Propylbenzene	ND		250	276	110	279	112	1	70-130/30
100-42-5	Styrene	ND		250	230	92	231	92	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	255	102	256	102	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	253	101	243	97	4	70-130/30
127-18-4	Tetrachloroethene	ND		250	250	100	251	100	0	70-130/30
108-88-3	Toluene	ND		250	256	102	253	101	1	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	254	102	273	109	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	272	109	282	113	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	263	105	263	105	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	239	96	235	94	2	70-130/30
79-01-6	Trichloroethene	ND		250	244	98	248	99	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	316	126	306	122	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	268	107	255	102	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	280	112	284	114	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	286	114	287	115	0	70-130/30
108-05-4	Vinyl Acetate	ND		250	241	96	238	95	1	70-130/30
75-01-4	Vinyl chloride	ND		250	243	97	244	98	0	70-130/30
	m,p-Xylene	ND		500	421	84	424	85	1	70-130/30
95-47-6	o-Xylene	ND		250	211	84	212	85	0	70-130/30
1330-20-7	Xylene (total)	ND		750	632	84	636	85	1	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28113-4MS	V27771.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4MSD	V27772.D	5	02/10/14	AMY	n/a	n/a	MSV1046
MC28113-4	V27760.D	1	02/10/14	AMY	n/a	n/a	MSV1046

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

MC28046-1, MC28046-2

CAS No.	Surrogate Recoveries	MS	MSD	MC28113-4	Limits
1868-53-7	Dibromofluoromethane	98%	98%	107%	70-130%
2037-26-5	Toluene-D8	99%	98%	97%	70-130%
460-00-4	4-Bromofluorobenzene	102%	101%	103%	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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1046-CC1019	**Injection Date:**	02/10/14
Lab File ID:	V27750.D	**Injection Time:**	09:10
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	534127	6.57	673061	7.75	365992	11.08	392790	13.29	174682	3.52
Upper Limit [a]	1068254	7.07	1346122	8.25	731984	11.58	785580	13.79	349364	4.02
Lower Limit [b]	267064	6.07	336531	7.25	182996	10.58	196395	12.79	87341	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
MSV1046-BS	532374	6.57	670712	7.75	362322	11.08	389835	13.29	154326	3.52
MSV1046-MB	466795	6.57	615908	7.74	329845	11.08	315739	13.29	169620	3.52
ZZZZZZ	455638	6.57	610981	7.74	328418	11.08	313907	13.29	133955	3.52
MC28046-2	430203	6.56	583204	7.74	313791	11.08	299278	13.29	124140	3.51
ZZZZZZ	425262	6.57	576397	7.75	310656	11.08	296261	13.29	151734	3.52
ZZZZZZ	403947	6.57	543947	7.75	295802	11.08	301901	13.29	120098	3.52
MC28113-4	413538	6.56	556500	7.74	298292	11.08	283541	13.29	126997	3.51
ZZZZZZ	515114	6.57	726409	7.74	356817	11.08	326407	13.29	169382	3.53
ZZZZZZ	418741	6.57	580459	7.75	309312	11.08	291199	13.29	143746	3.52
ZZZZZZ	377934	6.56	521951	7.74	280002	11.08	272411	13.29	120050	3.52
ZZZZZZ	390529	6.56	531576	7.74	287750	11.07	276208	13.29	131548	3.51
ZZZZZZ	383915	6.56	547891	7.74	290220	11.07	272230	13.29	111510	3.51
ZZZZZZ	373133	6.56	537110	7.74	286298	11.07	269619	13.29	104618	3.51
ZZZZZZ	362619	6.56	528875	7.74	281831	11.07	268189	13.29	110940	3.51
MC28113-4MS	470536	6.56	590685	7.74	320293	11.07	337803	13.28	144065	3.51
MC28113-4MSD	512262	6.56	647593	7.74	347914	11.07	362663	13.28	137883	3.51
ZZZZZZ	446581	6.56	587527	7.74	312702	11.07	311950	13.28	116484	3.51
MC28046-1	428142	6.55	572814	7.73	308792	11.07	293263	13.28	149989	3.50
ZZZZZZ	418274	6.56	585162	7.74	309590	11.07	312283	13.28	151168	3.51

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28046-1	V27774.D	106.0	97.0	104.0
MC28046-2	V27756.D	105.0	96.0	104.0
MC28113-4MS	V27771.D	98.0	99.0	102.0
MC28113-4MSD	V27772.D	98.0	98.0	101.0
MSV1046-BS	V27751.D	96.0	99.0	100.0
MSV1046-MB	V27754.D	101.0	97.0	104.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Tolnene-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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-MB	F71514.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: Method: SW846 8270D

MC28046-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-MB	F71514.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: Method: SW846 8270D

MC28046-1

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	39%	15-110%
4165-62-2	Phenol-d5	27%	15-110%
118-79-6	2,4,6-Tribromophenol	71%	15-110%
4165-60-0	Nitrobenzene-d5	62%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	86%	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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36750-MB	I87278.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28046-1

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.017	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	85%	30-130%
321-60-8	2-Fluorobiphenyl	73%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

Blank Spike Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-BS	F71515.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: Method: SW846 8270D

MC28046-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	15.5	31	30-130
95-57-8	2-Chlorophenol	50	37.8	76	30-130
59-50-7	4-Chloro-3-methyl phenol	50	39.8	80	30-130
120-83-2	2,4-Dichlorophenol	50	42.4	85	30-130
105-67-9	2,4-Dimethylphenol	50	36.4	73	30-130
51-28-5	2,4-Dinitrophenol	50	40.1	80	30-130
534-52-1	4,6-Dinitro-o-cresol	50	50.3	101	30-130
95-48-7	2-Methylphenol	50	33.6	67	30-130
	3&4-Methylphenol	100	63.2	63	30-130
88-75-5	2-Nitrophenol	50	40.2	80	30-130
100-02-7	4-Nitrophenol	50	17.5	35	30-130
87-86-5	Pentachlorophenol	50	39.2	78	30-130
108-95-2	Phenol	50	17.5	35	30-130
95-95-4	2,4,5-Trichlorophenol	50	40.7	81	30-130
88-06-2	2,4,6-Trichlorophenol	50	40.7	81	30-130
62-53-3	Aniline	50	28.8	58	40-140
101-55-3	4-Bromophenyl phenyl ether	50	51.8	104	40-140
85-68-7	Butyl benzyl phthalate	50	46.9	94	40-140
100-51-6	Benzyl Alcohol	50	32.1	64	40-140
91-58-7	2-Chloronaphthalene	50	41.5	83	40-140
106-47-8	4-Chloroaniline	50	36.9	74	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	41.1	82	40-140
111-44-4	his(2-Chloroethyl)ether	50	41.2	82	40-140
108-60-1	his(2-Chloroisopropyl)ether	50	45.2	90	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	44.4	89	40-140
122-66-7	1,2-Diphenylhydrazine	50	46.3	93	40-140
121-14-2	2,4-Dinitrotoluene	50	45.5	91	40-140
606-20-2	2,6-Dinitrotoluene	50	43.4	87	40-140
91-94-1	3,3'-Dichlorobenzidine	50	52.0	104	40-140
132-64-9	Dibenzofuran	50	38.7	77	40-140
84-74-2	Di-n-butyl phthalate	50	45.9	92	40-140
117-84-0	Di-n-octyl phthalate	50	50.7	101	40-140
84-66-2	Diethyl phthalate	50	38.2	76	40-140
131-11-3	Dimethyl phthalate	50	24.1	48	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	50.9	102	40-140
118-74-1	Hexachlorobenzene	50	51.5	103	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-BS	F71515.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: Method: SW846 8270D

MC28046-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	19.6	39* a	40-140
67-72-1	Hexachloroethane	50	29.0	58	40-140
78-59-1	Isophorone	50	38.5	77	40-140
88-74-4	2-Nitroaniline	50	43.0	86	40-140
99-09-2	3-Nitroaniline	50	40.2	80	40-140
100-01-6	4-Nitroaniline	50	40.6	81	40-140
98-95-3	Nitrobenzene	50	38.7	77	40-140
62-75-9	n-Nitrosodimethylamine	50	28.8	58	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	42.3	85	40-140
86-30-6	N-Nitrosodiphenylamine	50	46.4	93	40-140
110-86-1	Pyridine	50	23.3	47	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	52%	15-110%
4165-62-2	Phenol-d5	33%	15-110%
118-79-6	2,4,6-Tribromophenol	100%	15-110%
4165-60-0	Nitrobenzene-d5	76%	30-130%
321-60-8	2-Fluorobiphenyl	77%	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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36750-BS	I87279.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28046-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	42.8	86	40-140
208-96-8	Acenaphthylene	50	36.0	72	40-140
120-12-7	Anthracene	50	41.6	83	40-140
56-55-3	Benzo(a)anthracene	50	48.8	98	40-140
50-32-8	Benzo(a)pyrene	50	46.0	92	40-140
205-99-2	Benzo(b)fluoranthene	50	47.1	94	40-140
191-24-2	Benzo(g,h,i)perylene	50	52.1	104	40-140
207-08-9	Benzo(k)fluoranthene	50	48.8	98	40-140
218-01-9	Chrysene	50	45.9	92	40-140
53-70-3	Dibenzo(a,h)anthracene	50	53.2	106	40-140
206-44-0	Fluoranthene	50	46.2	92	40-140
86-73-7	Fluorene	50	43.1	86	40-140
193-39-5	Indeno(1,2,3-cd)pyrene	50	53.1	106	40-140
90-12-0	1-Methylnaphthalene	50	37.2	74	40-140
91-57-6	2-Methylnaphthalene	50	36.3	73	40-140
85-01-8	Phenanthrene	50	42.0	84	40-140
129-00-0	Pyrene	50	45.2	90	40-140

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	82%	30-130%
321-60-8	2-Fluorobiphenyl	68%	30-130%
1718-51-0	Terphenyl-d14	84%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-MS	F71516.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184
OP36776-MSD	F71517.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184
MC28000-11	F71518.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC28046-1

CAS No.	Compound	MC28000-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	15.8	32	15.3	31	3	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.5	73	37.0	74	1	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	37.6	75	34.2	68	9	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	41.5	83	40.0	80	4	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	37.0	74	35.3	71	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	39.8	80	38.0	76	5	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	43.3	87	46.2	92	6	30-130/20
95-48-7	2-Methylphenol	ND		50	32.9	66	32.9	66	0	30-130/20
	3&4-Methylphenol	ND		100	59.8	60	59.5	60	1	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.1	84	39.3	79	7	30-130/20
100-02-7	4-Nitrophenol	ND		50	17.0	34	16.9	34	1	30-130/20
87-86-5	Pentachlorophenol	ND		50	37.0	74	36.6	73	1	30-130/20
108-95-2	Phenol	ND		50	17.0	34	16.2	32	5	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.8	90	41.8	84	7	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	43.2	86	41.3	83	4	30-130/20
62-53-3	Aniline	ND		50	27.7	55	26.6	53	4	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	45.3	91	44.1	88	3	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	45.6	91	44.2	88	3	40-140/20
100-51-6	Benzyl Alcohol	ND		50	30.3	61	30.3	61	0	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	44.3	89	40.6	81	9	40-140/20
106-47-8	4-Chloroaniline	ND		50	36.3	73	33.3	67	9	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.3	81	38.7	77	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	39.4	79	38.3	77	3	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	45.7	91	44.8	90	2	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	42.4	85	41.9	84	1	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	38.2	76	39.6	79	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	45.2	90	44.4	89	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	43.4	87	43.2	86	0	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	50.2	100	49.0	98	2	40-140/20
132-64-9	Dibenzofuran	ND		50	39.3	79	38.5	77	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	43.6	87	43.5	87	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	48.0	96	46.6	93	3	40-140/20
84-66-2	Diethyl phthalate	ND		50	39.6	79	37.9	76	4	40-140/20
131-11-3	Dimethyl phthalate	ND		50	28.4	57	25.1	50	12	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	45.3	91	47.2	94	4	40-140/20
118-74-1	Hexachlorobenzene	ND		50	44.1	88	43.4	87	2	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36776-MS	F71516.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184
OP36776-MSD	F71517.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184
MC28000-11	F71518.D	1	02/11/14	WK	02/06/14	OP36776	MSF3184

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC28046-1

CAS No.	Compound	MC28000-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	21.9	44	20.0	40	9	40-140/20
67-72-1	Hexachloroethane	ND		50	27.2	54	28.4	57	4	40-140/20
78-59-1	Isophorone	ND		50	40.0	80	38.2	76	5	40-140/20
88-74-4	2-Nitroaniline	ND		50	44.8	90	42.5	85	5	40-140/20
99-09-2	3-Nitroaniline	ND		50	40.7	81	40.3	81	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	42.1	84	41.2	82	2	40-140/20
98-95-3	Nitrobenzene	ND		50	38.9	78	38.5	77	1	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	26.7	53	25.1	50	6	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	39.0	78	39.5	79	1	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	39.8	80	41.5	83	4	40-140/20
110-86-1	Pyridine	ND		50	22.2	44	20.5	41	8	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-11	Limits
367-12-4	2-Fluorophenol	49%	49%	46%	15-110%
4165-62-2	Phenol-d5	33%	31%	29%	15-110%
118-79-6	2,4,6-Tribromophenol	84%	86%	81%	15-110%
4165-60-0	Nitrobenzene-d5	77%	75%	71%	30-130%
321-60-8	2-Fluorobiphenyl	84%	78%	76%	30-130%
1718-51-0	Terphenyl-d14	93%	90%	94%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36750-MS	I87292.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244
OP36750-MSD	I87293.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244
MC28000-4	I87294.D	1	02/04/14	MR	02/03/14	OP36750	MSI3244

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28046-1

CAS No.	Compound	MC28000-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	40.4	81	43.8	88	8	40-140/20
208-96-8	Acenaphthylene	ND		50	34.2	68	36.8	74	7	40-140/20
120-12-7	Anthracene	ND		50	40.0	80	42.9	86	7	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	46.4	93	49.9	100	7	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	43.7	87	48.4	97	10	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	46.5	93	50.1	100	7	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	49.0	98	54.8	110	11	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	45.6	91	51.1	102	11	40-140/20
218-01-9	Chrysene	ND		50	43.5	87	47.4	95	9	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	50.1	100	55.9	112	11	40-140/20
206-44-0	Fluoranthene	ND		50	43.9	88	47.3	95	7	40-140/20
86-73-7	Fluorene	ND		50	41.0	82	45.0	90	9	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	49.8	100	55.6	111	11	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	34.7	69	36.6	73	5	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	33.8	68	35.3	71	4	40-140/20
85-01-8	Phenanthrene	0.041	J	50	40.6	81	43.5	87	7	40-140/20
129-00-0	Pyrene	ND		50	43.3	87	46.6	93	7	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-4	Limits
4165-60-0	Nitrobenzene-d5	75%	81%	80%	30-130%
321-60-8	2-Fluorobiphenyl	62%	62%	62%	30-130%
1718-51-0	Terphenyl-d14	79%	85%	88%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSF3184-CC3181	Injection Date:	02/11/14
Lab File ID:	F71507.D	Injection Time:	08:46
Instrument ID:	GCMSF	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	828578	4.36	3056238	5.42	1839931	6.95	2933624	8.23	3335126	10.86	3299792	12.59
Upper Limit [a]	1657156	4.86	6112476	5.92	3679862	7.45	5867248	8.73	6670252	11.36	6599584	13.09
Lower Limit [b]	414289	3.86	1528119	4.92	919966	6.45	1466812	7.73	1667563	10.36	1649896	12.09
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
OP36804-MB	791466	4.36	2713842	5.42	1778142	6.95	2743802	8.23	3031986	10.86	2988415	12.59
OP36804-BS	771817	4.36	2817886	5.42	1650829	6.95	3023366	8.23	3333991	10.86	3308084	12.59
OP36804-MS	813080	4.36	2974674	5.42	1824281	6.95	3092172	8.23	3259321	10.86	3083073	12.59
OP36804-MSD	749550	4.36	2750751	5.42	1782244	6.95	3014002	8.23	3413600	10.86	3363565	12.59
MC28185-1	774040	4.36	2826201	5.42	1686108	6.95	2834011	8.23	3193060	10.86	3232718	12.59
ZZZZZZ	834359	4.36	2872829	5.42	1875801	6.95	3134377	8.23	3398255	10.86	3395926	12.59
OP36776-MB	861453	4.36	3200380	5.42	1851530	6.95	3209686	8.23	3692440	10.86	3382709	12.59
OP36776-BS	850601	4.36	3189700	5.42	1961201	6.95	2984610	8.23	3351570	10.86	3237023	12.59
OP36776-MS	860713	4.36	3015407	5.42	1769903	6.95	3227164	8.23	3606081	10.86	3340845	12.59
OP36776-MSD	895547	4.36	3326090	5.42	1864051	6.95	3204472	8.23	3626863	10.86	3786254	12.59
MC28000-11	779854	4.36	2763539	5.42	1552061	6.95	2643295	8.23	2947952	10.86	2918662	12.59
ZZZZZZ	774145	4.36	2794716	5.42	1722170	6.94	2999602	8.23	3312827	10.86	3301922	12.59
ZZZZZZ	825246	4.36	2994467	5.42	1845632	6.95	3167076	8.23	3580629	10.86	3614283	12.59
ZZZZZZ	697958	4.36	2569020	5.42	1594843	6.95	2723903	8.23	3123529	10.86	3149521	12.59
ZZZZZZ	728533	4.36	2630009	5.42	1623114	6.95	2829492	8.23	3243088	10.86	3236045	12.59
ZZZZZZ	770358	4.36	2798756	5.42	1704904	6.95	2911457	8.23	3320092	10.86	3350463	12.59
MC28046-1	788416	4.36	2888988	5.42	1779060	6.95	3089573	8.23	3599408	10.86	3597031	12.59
ZZZZZZ	808483	4.36	2908689	5.42	1885782	6.95	3096797	8.23	3607097	10.86	3632034	12.59

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3244-CC3238	Injection Date:	02/04/14
Lab File ID:	I87277.D	Injection Time:	13:59
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	348846	4.42	766857	5.47	416092	7.02	681994	8.45	425618	11.21	1131835	12.72
Upper Limit [a]	697692	4.92	1533714	5.97	832184	7.52	1363988	8.95	851236	11.71	2263670	13.22
Lower Limit [b]	174423	3.92	383429	4.97	208046	6.52	340997	7.95	212809	10.71	565918	12.22
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
OP36750-MB	321805	4.42	701611	5.47	376610	7.02	616736	8.45	377390	11.21	1004962	12.72
OP36750-BS	337337	4.42	739134	5.48	399772	7.02	654447	8.45	409132	11.22	1063561	12.72
OP36747-MB	372560	4.42	825977	5.47	445527	7.02	714725	8.45	435083	11.21	1114877	12.72
OP36747-BS	379288	4.42	844915	5.48	452068	7.02	720831	8.45	439688	11.22	1103762	12.72
OP36747-MS	387984	4.42	869729	5.48	464698	7.02	738732	8.45	444800	11.22	1118566	12.72
OP36747-MSD	368050	4.42	813694	5.48	434718	7.02	700939	8.45	423311	11.22	1075052	12.72
MC28051-1	381576	4.42	847155	5.47	452707	7.02	720170	8.44	433560	11.21	1113133	12.72
ZZZZZZ	381027	4.41	831614	5.47	446175	7.02	706703	8.44	428376	11.21	1095745	12.72
ZZZZZZ	365938	4.42	806775	5.47	425840	7.02	672176	8.45	401128	11.21	1026164	12.72
ZZZZZZ	381946	4.42	833235	5.47	440754	7.02	696922	8.45	417355	11.21	1061018	12.72
ZZZZZZ	403264	4.42	885214	5.47	477614	7.02	751037	8.44	449948	11.21	1139908	12.72
ZZZZZZ	385959	4.42	846919	5.47	448794	7.02	717865	8.45	426623	11.21	1064676	12.72
ZZZZZZ	340487	4.42	748566	5.47	403595	7.02	643043	8.44	379720	11.21	951128	12.72
ZZZZZZ	364846	4.42	795755	5.47	421248	7.02	660627	8.44	394204	11.21	995043	12.72
OP36750-MS	345200	4.42	766285	5.48	412005	7.02	658444	8.45	412387	11.22	1051475	12.72
OP36750-MSD	313660	4.42	691110	5.47	368076	7.02	600224	8.45	382633	11.22	967845	12.72
MC28000-4	329503	4.42	726170	5.47	388551	7.02	625639	8.44	383174	11.21	1005006	12.72
ZZZZZZ	346384	4.42	752840	5.47	402301	7.02	648941	8.44	404166	11.21	1058739	12.72
MC28046-1	347008	4.42	752161	5.47	400602	7.02	645027	8.44	397364	11.21	1032211	12.72
ZZZZZZ	610316	4.42	1349025	5.47	736503	7.02	1190786	8.45	779350	11.22	1968375	12.73
ZZZZZZ	591084	4.42	1298339	5.47	718596	7.02	1145875	8.45	760066	11.22	1941496	12.73
ZZZZZZ	597619	4.42	1311865	5.47	721078	7.02	1165553	8.45	777308	11.21	1974636	12.73
ZZZZZZ	342027	4.42	747592	5.47	397671	7.02	642755	8.44	413657	11.21	1042258	12.72
ZZZZZZ	595511	4.42	1314248	5.47	717012	7.02	1156482	8.45	779843	11.22	1973996	12.73
ZZZZZZ	343783	4.42	763438	5.47	419176	7.02	673343	8.44	429194	11.21	1079605	12.72
ZZZZZZ	338141	4.42	725553	5.47	392359	7.02	627607	8.44	412587	11.21	1049424	12.72
ZZZZZZ	358107	4.41	786674	5.47	422455	7.02	668008	8.44	403969	11.21	1001761	12.72

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3244-CC3238	Injection Date:	02/04/14
Lab File ID:	I87277.D	Injection Time:	13:59
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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28046-1	F71524.D	21.0	15.0	63.0	67.0	70.0	85.0
OP36776-BS	F71515.D	52.0	33.0	100.0	76.0	77.0	96.0
OP36776-MB	F71514.D	39.0	27.0	71.0	62.0	68.0	86.0
OP36776-MS	F71516.D	49.0	33.0	84.0	77.0	84.0	93.0
OP36776-MSD	F71517.D	49.0	31.0	86.0	75.0	78.0	90.0

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28046-1	I87296.D	58.0	49.0	71.0
OP36750-BS	I87279.D	82.0	68.0	84.0
OP36750-MB	I87278.D	85.0	73.0	92.0
OP36750-MS	I87292.D	75.0	62.0	79.0
OP36750-MSD	I87293.D	81.0	62.0	85.0

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	30-130%
S2 = 2-Fluorobiphenyl	30-130%
S3 = Terphenyl-d14	30-130%

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-MB	BK34501.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: Method: SW846 8011

MC28046-1, MC28046-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	92%	36-173%
460-00-4	Bromofluorobenzene (S)	92%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-BS	BK34502.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: Method: SW846 8011

MC28046-1, MC28046-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.091	128	60-140
106-93-4	1,2-Dibromoethane	0.071	0.072	101	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	116%	36-173%
460-00-4	Bromofluorobenzene (S)	116%	36-173%

8.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36754-MS	BK34503.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
OP36754-MSD	BK34504.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140
MC28000-5	BK34505.D	1	02/04/14	NK	02/03/14	OP36754	GBK1140

The QC reported here applies to the following samples: **Method:** SW846 8011

MC28046-1, MC28046-3

CAS No.	Compound	MC28000-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.087	123	0.095	134	9	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.065	92	0.069	97	6	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-5	Limits
460-00-4	Bromofluorobenzene (S)	110%	117%	85%	36-173%
460-00-4	Bromofluorobenzene (S)	115%	118%	95%	36-173%

8.3.1

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC28046-1	BK34514.D	111.0	102.0
MC28046-3	BK34515.D	108.0	106.0
OP36754-BS	BK34502.D	116.0	116.0
OP36754-MB	BK34501.D	92.0	92.0
OP36754-MS	BK34503.D	110.0	115.0
OP36754-MSD	BK34504.D	117.0	118.0

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1140-ICC1140	Injection Date:	02/04/14
Lab File ID:	BK34496.D	Injection Time:	08:58
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.33	4.39

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34499A.D	02/04/14	10:06	4.33	4.40
OP36754-MB	BK34501.D	02/04/14	10:51	4.33	4.39
OP36754-BS	BK34502.D	02/04/14	11:14	4.33	4.39
OP36754-MS	BK34503.D	02/04/14	11:37	4.33	4.39
OP36754-MSD	BK34504.D	02/04/14	11:59	4.33	4.39
MC28000-5	BK34505.D	02/04/14	12:22	4.33	4.39
ZZZZZZ	BK34506.D	02/04/14	12:44	4.33	4.39
ZZZZZZ	BK34507.D	02/04/14	13:07	4.33	4.39
ZZZZZZ	BK34508.D	02/04/14	13:30	4.33	4.39
ZZZZZZ	BK34509.D	02/04/14	13:53	4.33	4.39
ZZZZZZ	BK34510.D	02/04/14	14:15	4.33	4.39

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: MC28046
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBK1140-CC1140	Injection Date:	02/04/14
Lab File ID:	BK34511.D	Injection Time:	14:38
Instrument ID:	GCBK	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.33	4.40

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BK34512.D	02/04/14	15:01	4.33	4.39
ZZZZZZ	BK34513.D	02/04/14	15:24	4.33	4.39
MC28046-1	BK34514.D	02/04/14	15:47	4.33	4.40
MC28046-3	BK34515.D	02/04/14	16:10	4.33	4.39
GBK1140-ECC114	BK34516.D	02/04/14	16:32	4.33	4.39

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC28118

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/3/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
P59-ROX-020314	P57-ROX-020314-EB
P57-ROX-020314	P58-ROX-020314
TB-ROX-020314-HCL	TB-ROX-020314-ST

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the compound phenanthrene were detected in the method blank; VOCs were detected in the equipment blank. VOC and SVOC LCS/LCSD recoveries were outside evaluation criteria. The SVOC surrogate recovery for 2-fluorophenol was outside evaluation criteria in the confirmation run of sample P59-ROX-020314. VOC MS/MSD recoveries were outside evaluation criteria in sample P57-ROX-020314. Sample 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 acrolein and 2-chloroethyl vinyl ether exceeded 30 percent difference (%D). The continuing calibration verification for 2-chloroethyl vinyl ether exceeded 40%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
P57-ROX-020314-EB	VOCs	Benzene	2.6 µg/L
P57-ROX-020314-EB	VOCs	Ethylbenzene	0.66 µg/L

Blank ID	Parameter	Analyte	Concentration/ Amount
P57-ROX-020314-EB	VOCs	m,p-Xylene	8.0 µg/L
P57-ROX-020314-EB	VOCs	Xylene (total)	8.0 µg/L
OP36790-MB	SVOCs	Di-n-butyl phthalate	0.55 µg/L
OP36790-MB	SVOCs	bis(2-Ethylhexyl)phthalate	2.6 µg/L
OP36791-MB	PAHs	Phenanthrene	0.018 µg/L

Analytical data that were reported non-detect or at concentrations greater than five times (5X) the associated blank concentration did not required 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
MSV1048-BS/BSD	VOCs	2-Chloroethyl vinyl ether	**380/173**	**75**	70-130/25
OP36790-BS/BSD	SVOCs	Benzoic acid	**27/25**	8	30-130/20
OP36790-BS/BSD	SVOCs	Phenol	36/**27**	**26**	30-130/20
OP36790-BS/BSD	SVOCs	Hexachlorocyclopentadiene	**19/20**	6	40-140/20
OP36790-BS/BSD	SVOCs	Hexachloroethane	**35/35**	1	40-140/20
OP36790-BS/BSD	SVOCs	Pyridine	**37/35**	5	40-140/20

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 OP36790-BS/BSD was associated with the equipment blank; equipment blanks are quality control samples and are not qualified.

Sample ID	Parameter	Analyte	Qualification
P59-ROX-020314	SVOCs	Benzoic acid	**UJ**
P59-ROX-020314	SVOCs	Phenol	**J**
P59-ROX-020314	SVOCs	Hexachlorocyclopentadiene	**UJ**
P59-ROX-020314	SVOCs	Hexachloroethane	**UJ**
P59-ROX-020314	SVOCs	Pyridine	**UJ**
P57-ROX-020314	SVOCs	Benzoic acid	**UJ**
P57-ROX-020314	SVOCs	Phenol	**J**
P57-ROX-020314	SVOCs	Hexachlorocyclopentadiene	**UJ**
P57-ROX-020314	SVOCs	Hexachloroethane	**UJ**
P57-ROX-020314	SVOCs	Pyridine	**UJ**
P58-ROX-020314	SVOCs	Benzoic acid	**UJ**

Sample ID	Parameter	Analyte	Qualification
P58-ROX-020314	SVOCs	Phenol	**J**
P58-ROX-020314	SVOCs	Hexachlorocyclopentadiene	**UJ**
P58-ROX-020314	SVOCs	Hexachloroethane	**UJ**
P58-ROX-020314	SVOCs	Pyridine	**UJ**

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
P59-ROX-020314-Run#2	SVOCs	2-Fluorophenol	**0**	15-110

Analytical data that required qualification based on surrogate data are included in the table below.

Sample ID	Parameter	Analyte	Qualification
P59-ROX-020314	SVOCs	2,4-Dimethylphenol	**J**
P59-ROX-020314	SVOCs	2-Methylphenol	**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 P57-ROX-020314 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
P57-ROX-020314	VOCs	Acetone	**51/55**	8	70-130/30
P57-ROX-020314	VOCs	2-Butanone (MEK)	**65/65**	0	70-130/30
P57-ROX-020314	VOCs	2-Hexanone	71/**68**	4	70-130/30

USEPA National Functional Guidelines for Organic Data Review indicates that organic data does not require qualification based on MS/MSD data alone. LCS/LCSD recoveries were within evaluation criteria. 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

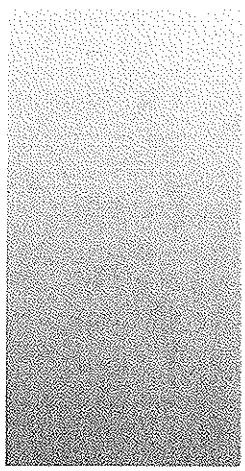
For samples that were diluted and nondetect, were undiluted results also reported?

Not applicable; analytes were detected in samples that were diluted.

12.0 Additional Qualifications

Were additional qualifications applied?

No



Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC28118

Sampling Date: 02/03/14

Report to:

URS Corporation

elizabeth.kunkel@URS.com

ATTN: Elizabeth Kunkel

Total number of pages in report: **81**

Reviewed on 3/3/2014

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 (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: MC28118

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC28118-1	02/03/14	10:30	DMMM	02/05/14	AQ	Ground Water	P59-ROX-020314
MC28118-2	02/03/14	10:50	DMMM	02/05/14	AQ	Equipment Blank	P57-ROX-020314-EB
MC28118-3	02/03/14	11:55	DMMM	02/05/14	AQ	Ground Water	P57-ROX-020314
MC28118-4	02/03/14	14:10	DMMM	02/05/14	AQ	Ground Water	P58-ROX-020314
MC28118-5	02/03/14	00:00	DMMM	02/05/14	AQ	Trip Blank Water	TB-ROX-020314-HCL
MC28118-6	02/03/14	00:00	DMMM	02/05/14	AQ	Trip Blank Water	TB-ROX-020314-ST

ACCUTEST LABORATORIES

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC28118
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/18/2014 2:44:41 PM

4 Sample(s) and 2 Trip Blank(s) were collected on 02/03/2014 and were received at Accutest on 02/05/2014 properly preserved, at 4.6 Deg. C and intact. These Samples received an Accutest job number of MC28118. 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:** MSV1048

- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28118-3MS, MC28118-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Initial calibration verification standard MSV1019-ICV1019 for acrolein, 2-chloroethyl vinyl ether exceed 30% Difference (response biased high). Associated samples are non-detect for these compounds.
- Continuing calibration standard MSV1048-CC1019 for 2-chloroethyl vinyl ether exc eed 40% Difference (response biased high). Associated samples are non-detect for these compound.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), 2-Hexanone, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- RPD of MSV1048-BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.
- MSV1048-BS/BSD for 2-Chloroethyl vinyl ether: Outside control limits. Associated samples are non-detect for this compound.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP36790

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28000-20MS, MC28000-20MSD were used as the QC samples indicated.
- OP36790-BS Recovery(s) for Benzoic Acid, Hexachlorocyclopentadiene, Hexachloroethane, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for Hexachlorocyclopentadiene, Pyridine are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Hexachlorocyclopentadiene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- OP36790-BSD Recovery(s) for Phenol, Benzoic Acid, Hexachlorocyclopentadiene, Hexachloroethane, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- MC28118-1 for 2-Fluorophenol: Outside control limits due to dilution.
- RPD of OP36790-BSD for Phenol: Outside control limits. Blank Spike meets program technical requirements.
- OP36790-MS/MSD Recovery(s) for Benzoic Acid: Outside control limits. Blank Spike meets program technical requirements.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix AQ	Batch ID: OP36791

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28000-21MS, MC28000-21MSD 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: OP36782

- All samples were extraeted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC28000-14MS, MC28000-14MSD 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(MC28118).

Summary of Hits

Job Number: MC28118
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 02/03/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC28118-1	P59-ROX-020314					
Benzene		15900	500	450	ug/l	SW846 8260C
n-Butylbenzene		16.5 J	100	11	ug/l	SW846 8260C
Ethylbenzene		1860	20	7.5	ug/l	SW846 8260C
Isopropylbenzene		40.9 J	100	13	ug/l	SW846 8260C
Naphthalene		32.1 J	100	16	ug/l	SW846 8260C
n-Propylbenzene		82.4 J	100	12	ug/l	SW846 8260C
Toluene		660	20	9.2	ug/l	SW846 8260C
1,2,4-Trimethylbenzene		621	100	9.3	ug/l	SW846 8260C
1,3,5-Trimethylbenzene		193	100	22	ug/l	SW846 8260C
m,p-Xylene		3790	20	18	ug/l	SW846 8260C
o-Xylene		438	20	8.2	ug/l	SW846 8260C
Xylene (total)		4230	20	8.2	ug/l	SW846 8260C
2,4-Dimethylphenol		147	100	12	ug/l	SW846 8270D
2-Methylphenol		310	100	13	ug/l	SW846 8270D
3&4-Methylphenol		14.2	10	2.1	ug/l	SW846 8270D
Phenol		44.4	5.2	0.53	ug/l	SW846 8270D
Acenaphthene		0.46	0.10	0.071	ug/l	SW846 8270D BY SIM
Anthracene		0.18	0.10	0.095	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.035 J	0.052	0.020	ug/l	SW846 8270D BY SIM
Chrysene		0.046 J	0.10	0.025	ug/l	SW846 8270D BY SIM
Fluoranthene		0.12	0.10	0.042	ug/l	SW846 8270D BY SIM
Fluorene		0.67	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		14.1	0.21	0.051	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		21.4	0.21	0.076	ug/l	SW846 8270D BY SIM
Phenanthrene		1.4	0.052	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.19	0.10	0.040	ug/l	SW846 8270D BY SIM
MC28118-2	P57-ROX-020314-EB					
Benzene		2.6	0.50	0.45	ug/l	SW846 8260C
Ethylbenzene		0.66 J	1.0	0.38	ug/l	SW846 8260C
m,p-Xylene		8.0	1.0	0.91	ug/l	SW846 8260C
Xylene (total)		8.0	1.0	0.41	ug/l	SW846 8260C
MC28118-3	P57-ROX-020314					
Benzene		261000	500	450	ug/l	SW846 8260C
Ethylbenzene		697 J	1000	380	ug/l	SW846 8260C
3&4-Methylphenol		2.7 J	11	2.1	ug/l	SW846 8270D
Phenol		168	5.3	0.54	ug/l	SW846 8270D
Dibenzofuran		0.67 J	2.1	0.16	ug/l	SW846 8270D
Acenaphthene		0.41	0.11	0.073	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.075 J	0.11	0.052	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC28118
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 02/03/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluorene		0.62	0.11	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		23.4	0.21	0.053	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		31.4	0.21	0.078	ug/l	SW846 8270D BY SIM
Phenanthrene		0.52	0.053	0.013	ug/l	SW846 8270D BY SIM
MC28118-4	P58-ROX-020314					
Benzene		496000	2500	2300	ug/l	SW846 8260C
Ethylbenzene		767 J	1000	380	ug/l	SW846 8260C
3&4-Methylphenol		7.3 J	10	2.1	ug/l	SW846 8270D
Phenol		123	26	2.7	ug/l	SW846 8270D
Dibenzofuran		1.6 J	2.1	0.16	ug/l	SW846 8270D
Acenaphthene		0.61	0.10	0.072	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.18	0.10	0.052	ug/l	SW846 8270D BY SIM
Benzo(a)anthracene		0.035 J	0.052	0.020	ug/l	SW846 8270D BY SIM
Benzo(a)pyrene		0.047 J	0.10	0.030	ug/l	SW846 8270D BY SIM
Chrysene		0.079 J	0.10	0.025	ug/l	SW846 8270D BY SIM
Fluoranthene		0.058 J	0.10	0.042	ug/l	SW846 8270D BY SIM
Fluorene		1.1	0.10	0.10	ug/l	SW846 8270D BY SIM
1-Methylnaphthalene		35.3	0.21	0.052	ug/l	SW846 8270D BY SIM
2-Methylnaphthalene		47.4	0.21	0.077	ug/l	SW846 8270D BY SIM
Phenanthrene		0.69	0.052	0.013	ug/l	SW846 8270D BY SIM
Pyrene		0.14	0.10	0.040	ug/l	SW846 8270D BY SIM
MC28118-5	TB-ROX-020314-HCL					
No hits reported in this sample.						
MC28118-6	TB-ROX-020314-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	P59-ROX-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27815.D	20	02/11/14	AMY	n/a	n/a	MSV1048
Run #2	V27812.D	1000	02/11/14	AMY	n/a	n/a	MSV1048

	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	200	56	ug/l	
107-02-8	Acrolein	ND	500	130	ug/l	
107-13-1	Acrylonitrile	ND	100	70	ug/l	
71-43-2	Benzene	15900 [a]	500	450	ug/l	
108-86-1	Bromobenzene	ND	100	8.7	ug/l	
74-97-5	Bromochloromethane	ND	100	13	ug/l	
75-27-4	Bromodichloromethane	ND	20	6.6	ug/l	
75-25-2	Bromoform	ND	20	8.4	ug/l	
74-83-9	Bromomethane	ND	40	30	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	92	ug/l	
104-51-8	n-Butylbenzene	16.5	100	11	ug/l	J
135-98-8	sec-Butylbenzene	ND	100	12	ug/l	
98-06-6	tert-Butylbenzene	ND	100	17	ug/l	
75-15-0	Carbon disulfide	ND	100	15	ug/l	
56-23-5	Carbon tetrachloride	ND	20	12	ug/l	
108-90-7	Chlorobenzene	ND	20	9.7	ug/l	
75-00-3	Chloroethane	ND	40	17	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	100	65	ug/l	
67-66-3	Chloroform	ND	20	10	ug/l	
74-87-3	Chloromethane	ND	40	29	ug/l	
95-49-8	o-Chlorotoluene	ND	100	11	ug/l	
106-43-4	p-Chlorotoluene	ND	100	9.5	ug/l	
124-48-1	Dihromochloromethane	ND	20	6.6	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	20	6.9	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	20	6.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	20	5.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	40	24	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	7.4	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	7.1	ug/l	
75-35-4	1,1-Dichloroethene	ND	20	13	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	20	11	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	20	11	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-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	40	9.1	ug/l	
142-28-9	1,3-Dichloropropane	ND	100	19	ug/l	
594-20-7	2,2-Dichloropropane	ND	100	25	ug/l	
563-58-6	1,1-Dichloropropene	ND	100	13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	4.3	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	5.7	ug/l	
123-91-1	1,4-Dioxane	ND	500	310	ug/l	
97-63-2	Ethyl methacrylate	ND	100	16	ug/l	
100-41-4	Ethylbenzene	1860	20	7.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	100	25	ug/l	
591-78-6	2-Hexanone	ND	100	78	ug/l	
98-82-8	Isopropylbenzene	40.9	100	13	ug/l	J
99-87-6	p-Isopropyltoluene	ND	100	11	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	8.6	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	100	26	ug/l	
74-95-3	Methylene bromide	ND	100	8.6	ug/l	
75-09-2	Methylene chloride	ND	40	8.1	ug/l	
91-20-3	Naphthalene	32.1	100	16	ug/l	J
103-65-1	n-Propylbenzene	82.4	100	12	ug/l	J
100-42-5	Styrene	ND	100	9.8	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	9.1	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	8.4	ug/l	
127-18-4	Tetrachloroethene	ND	20	12	ug/l	
108-88-3	Toluene	660	20	9.2	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	100	15	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	100	9.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	19	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	9.9	ug/l	
79-01-6	Trichloroethene	ND	20	9.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	20	12	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	100	14	ug/l	
95-63-6	1,2,4-Trimethylbenzene	621	100	9.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	193	100	22	ug/l	
108-05-4	Vinyl Acetate	ND	100	26	ug/l	
75-01-4	Vinyl chloride	ND	20	12	ug/l	
	m,p-Xylene	3790	20	18	ug/l	
95-47-6	o-Xylene	438	20	8.2	ug/l	
1330-20-7	Xylene (total)	4230	20	8.2	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-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	104%	70-130%
2037-26-5	Toluene-D8	96%	96%	70-130%
460-00-4	4-Bromofluorobenzene	106%	105%	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:	P59-ROX-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 Soutb Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R37028.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
Run #2	R37054.D	10	02/14/14	KR	02/07/14	OP36790	MSR1366

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2	970 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	147 [a]	100	12	ug/l	J
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	310 [a]	100	13	ug/l	J
	3&4-Methylphenol	14.2	10	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.60	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	44.4	5.2	0.53	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	10	0.59	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.88	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.59	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.95	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.67	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.66	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	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-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.50	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.2	0.45	ug/l	UJ
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.83	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.53	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	20%	0% [b]	15-110%
4165-62-2	Phenol-d5	26%	16%	15-110%
118-79-6	2,4,6-Tribromophenol	98%	53%	15-110%
4165-60-0	Nitrobenzene-d5	73%	44%	30-130%
321-60-8	2-Fluorobiphenyl	64%	40%	30-130%
1718-51-0	Terphenyl-d14	96%	54%	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:	P59-ROX-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87379.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
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	0.46	0.10	0.071	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.051	ug/l	
120-12-7	Anthracene	0.18	0.10	0.095	ug/l	
56-55-3	Benzo(a)anthracene	0.035	0.052	0.020	ug/l	J
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	0.046	0.10	0.025	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	0.12	0.10	0.042	ug/l	
86-73-7	Fluorene	0.67	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	14.1	0.21	0.051	ug/l	
91-57-6	2-Methylnaphthalene	21.4	0.21	0.076	ug/l	
85-01-8	Phenanthrene	1.4	0.052	0.013	ug/l	
129-00-0	Pyrene	0.19	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	55%		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:	P59-ROX-020314		
Lab Sample ID:	MC28118-1	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54243.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
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	0.0052	ug/l	
106-93-4	1,2-Dibromoetbane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	132%		36-173%
460-00-4	Bromofluorobenzene (S)	157%		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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27811.D	1	02/11/14	AMY	n/a	n/a	MSV1048
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	2.6	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	0.66	1.0	0.38	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	8.0	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	8.0	1.0	0.41	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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	95%		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	

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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R37029.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.3	0.54	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.1	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	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	30%		15-110%
4165-62-2	Phenol-d5	22%		15-110%
118-79-6	2,4,6-Tribromophenol	69%		15-110%
4165-60-0	Nitrobenzene-d5	63%		30-130%
321-60-8	2-Fluorobiphenyl	56%		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:	P57-ROX-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87380.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
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	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	0.078	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	59%		30-130%
321-60-8	2-Fluorobiphenyl	55%		30-130%
1718-51-0	Terphenyl-d14	88%		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-020314-EB		
Lab Sample ID:	MC28118-2	Date Sampled:	02/03/14
Matrix:	AQ - Equipment Blank	Date Received:	02/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54244.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	115%		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:	P57-ROX-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27813.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
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	10000	2800	ug/l	
107-02-8	Acrolein	ND	25000	6300	ug/l	
107-13-1	Acrylonitrile	ND	5000	3500	ug/l	
71-43-2	Benzene	261000	500	450	ug/l	
108-86-1	Bromobenzene	ND	5000	440	ug/l	
74-97-5	Bromochloromethane	ND	5000	640	ug/l	
75-27-4	Bromodichloromethane	ND	1000	330	ug/l	
75-25-2	Bromoform	ND	1000	420	ug/l	
74-83-9	Bromomethane	ND	2000	1500	ug/l	
78-93-3	2-Butanone (MEK)	ND	5000	4600	ug/l	
104-51-8	n-Butylbenzene	ND	5000	540	ug/l	
135-98-8	sec-Butylbenzene	ND	5000	580	ug/l	
98-06-6	tert-Butylbenzene	ND	5000	870	ug/l	
75-15-0	Carbon disulfide	ND	5000	770	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	620	ug/l	
108-90-7	Chlorohenzene	ND	1000	480	ug/l	
75-00-3	Chloroethane	ND	2000	840	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	3300	ug/l	
67-66-3	Chloroform	ND	1000	500	ug/l	
74-87-3	Chloromethane	ND	2000	1400	ug/l	
95-49-8	o-Chlorotoluene	ND	5000	550	ug/l	
106-43-4	p-Cblorotoluene	ND	5000	480	ug/l	
124-48-1	Dibromochloromethane	ND	1000	330	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	350	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	300	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	260	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2000	1200	ug/l	
75-34-3	1,1-Dichloroethane	ND	1000	370	ug/l	
107-06-2	1,2-Dichloroethane	ND	1000	350	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	670	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	540	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	540	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:	P57-ROX-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

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	970	ug/l	
594-20-7	2,2-Dichloropropane	ND	5000	1300	ug/l	
563-58-6	1,1-Dichloropropene	ND	5000	630	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	220	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	290	ug/l	
123-91-1	1,4-Dioxane	ND	25000	16000	ug/l	
97-63-2	Ethyl methacrylate	ND	5000	810	ug/l	
100-41-4	Ethylbenzene	697	1000	380	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5000	1300	ug/l	
591-78-6	2-Hexanone	ND	5000	3900	ug/l	
98-82-8	Isopropylbenzene	ND	5000	640	ug/l	
99-87-6	p-Isopropyltoluene	ND	5000	550	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1000	430	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	1300	ug/l	
74-95-3	Methylene bromide	ND	5000	430	ug/l	
75-09-2	Methylene chloride	ND	2000	410	ug/l	
91-20-3	Naphthalene	ND	5000	790	ug/l	
103-65-1	n-Propylbenzene	ND	5000	590	ug/l	
100-42-5	Styrene	ND	5000	490	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	460	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	420	ug/l	
127-18-4	Tetrachloroethene	ND	1000	610	ug/l	
108-88-3	Toluene	ND	1000	460	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5000	760	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5000	450	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	940	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	490	ug/l	
79-01-6	Trichloroethene	ND	1000	450	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	610	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5000	700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5000	470	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5000	1100	ug/l	
108-05-4	Vinyl Acetate	ND	5000	1300	ug/l	
75-01-4	Vinyl chloride	ND	1000	610	ng/l	
	m,p-Xylene	ND	1000	910	ug/l	
95-47-6	o-Xylene	ND	1000	410	ug/l	
1330-20-7	Xylene (total)	ND	1000	410	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P57-ROX-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-130%
2037-26-5	Toluene-D8	94%		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:	P57-ROX-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R37030.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
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	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.3	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	2.7	11	2.1	ug/l	J
88-75-5	2-Nitrophenol	ND	11	0.53	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	168	5.3	0.54	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	11	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.33	ug/l	
62-53-3	Aniline	ND	11	0.67	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	0.21	ug/l	
85-68-7	Butyl henzyl phthalate	ND	5.3	0.90	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.61	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	0.97	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.3	0.69	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.71	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.68	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.3	0.53	ug/l	
132-64-9	Dibenzofuran	0.67	2.1	0.16	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.3	0.41	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	0.46	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-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phtbalate	ND	5.3	0.53	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	0.53	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.3	0.46	ug/l	UJ
78-59-1	Isophorone	ND	5.3	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.53	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.6	ug/l	
98-95-3	Nitrobenzene	ND	5.3	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.3	0.53	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	0.85	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	0.57	ug/l	
110-86-1	Pyridine	ND	11	0.54	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		15-110%
4165-62-2	Phenol-d5	28%		15-110%
118-79-6	2,4,6-Tribromophenol	87%		15-110%
4165-60-0	Nitrobenzene-d5	81%		30-130%
321-60-8	2-Fluorobiphenyl	73%		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:	P57-ROX-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87381.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
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	0.41	0.11	0.073	ug/l	
208-96-8	Acenaphthylene	0.075	0.11	0.052	ug/l	J
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	0.62	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	23.4	0.21	0.053	ug/l	
91-57-6	2-Methylnaphthalene	31.4	0.21	0.078	ug/l	
85-01-8	Phenanthrene	0.52	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	74%		30-130%
321-60-8	2-Fluorobiphenyl	69%		30-130%
1718-51-0	Terphenyl-d14	89%		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-020314		
Lab Sample ID:	MC28118-3	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54245.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	108%		36-173%
460-00-4	Bromofluorobenzene (S)	140%		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-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27814.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
Run #2	V27816.D	5000	02/11/14	AMY	n/a	n/a	MSV1048

	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	2800	ug/l	
107-02-8	Acrolein	ND	25000	6300	ug/l	
107-13-1	Acrylonitrile	ND	5000	3500	ug/l	
71-43-2	Benzene	496000 [a]	2500	2300	ug/l	
108-86-1	Bromobenzene	ND	5000	440	ug/l	
74-97-5	Bromochloromethane	ND	5000	640	ug/l	
75-27-4	Bromodichloromethane	ND	1000	330	ug/l	
75-25-2	Bromoform	ND	1000	420	ug/l	
74-83-9	Bromomethane	ND	2000	1500	ug/l	
78-93-3	2-Butanone (MEK)	ND	5000	4600	ug/l	
104-51-8	n-Butylbenzene	ND	5000	540	ug/l	
135-98-8	sec-Butylbenzene	ND	5000	580	ug/l	
98-06-6	tert-Butylbenzene	ND	5000	870	ug/l	
75-15-0	Carbon disulfide	ND	5000	770	ug/l	
56-23-5	Carbon tetrachloride	ND	1000	620	ug/l	
108-90-7	Chlorobenzene	ND	1000	480	ug/l	
75-00-3	Chloroethane	ND	2000	840	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5000	3300	ug/l	
67-66-3	Chloroform	ND	1000	500	ug/l	
74-87-3	Chloromethane	ND	2000	1400	ug/l	
95-49-8	o-Chlorotoluene	ND	5000	550	ug/l	
106-43-4	p-Chlorotoluene	ND	5000	480	ug/l	
124-48-1	Dibromochloromethane	ND	1000	330	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1000	350	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1000	300	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1000	260	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2000	1200	ug/l	
75-34-3	1,1-Dichloroethane	ND	1000	370	ug/l	
107-06-2	1,2-Dichloroethane	ND	1000	350	ug/l	
75-35-4	1,1-Dichloroethene	ND	1000	670	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1000	540	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1000	540	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-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

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	970	ug/l	
594-20-7	2,2-Dichloropropane	ND	5000	1300	ug/l	
563-58-6	1,1-Dichloropropene	ND	5000	630	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	220	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	290	ug/l	
123-91-1	1,4-Dioxane	ND	25000	16000	ug/l	
97-63-2	Ethyl methacrylate	ND	5000	810	ug/l	
100-41-4	Ethylbenzene	767	1000	380	ug/l	J
87-68-3	Hexachlorobutadiene	ND	5000	1300	ug/l	
591-78-6	2-Hexanone	ND	5000	3900	ug/l	
98-82-8	Isopropylbenzene	ND	5000	640	ug/l	
99-87-6	p-Isopropyltoluene	ND	5000	550	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1000	430	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	1300	ug/l	
74-95-3	Methylene bromide	ND	5000	430	ug/l	
75-09-2	Methylene chloride	ND	2000	410	ug/l	
91-20-3	Naphthalene	ND	5000	790	ug/l	
103-65-1	n-Propylbenzene	ND	5000	590	ug/l	
100-42-5	Styrene	ND	5000	490	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	460	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	420	ug/l	
127-18-4	Tetrachloroethene	ND	1000	610	ug/l	
108-88-3	Toluene	ND	1000	460	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5000	760	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5000	450	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1000	940	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1000	490	ug/l	
79-01-6	Trichloroethene	ND	1000	450	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	610	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5000	700	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5000	470	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5000	1100	ug/l	
108-05-4	Vinyl Acetate	ND	5000	1300	ug/l	
75-01-4	Vinyl chloride	ND	1000	610	ug/l	
	m,p-Xylene	ND	1000	910	ug/l	
95-47-6	o-Xylene	ND	1000	410	ug/l	
1330-20-7	Xylene (total)	ND	1000	410	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 iu associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	P58-ROX-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	106%	70-130%
2037-26-5	Toluene-D8	94%	95%	70-130%
460-00-4	4-Bromofluorobeuzene	104%	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:	P58-ROX-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R37031.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
Run #2	R37055.D	5	02/14/14	KR	02/07/14	OP36790	MSR1366

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2	960 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	UJ
95-57-8	2-Chlorophenol	ND	5.2	0.40	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.34	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	7.3	10	2.1	ug/l	J
88-75-5	2-Nitrophenol	ND	10	0.52	ug/l	
100-02-7	4-Nitrophenol	ND	21	0.61	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	123 [a]	26	2.7	ug/l	J
95-95-4	2,4,5-Trichlorophenol	ND	10	0.60	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.33	ug/l	
62-53-3	Aniline	ND	10	0.66	ug/l	
101-55-3	4-Bromophenyl pheuyl ether	ND	5.2	0.21	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.2	0.89	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.60	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	0.96	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.26	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	0.22	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	0.24	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	0.68	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.70	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.67	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	0.52	ug/l	
132-64-9	Dibenzofuran	1.6	2.1	0.16	ug/l	J
84-74-2	Di-n-butyl phthalate	ND	5.2	0.40	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.2	0.45	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-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.52	ug/l	
131-11-3	Dimethyl phthalate	ND	5.2	0.52	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.1	0.51	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	0.31	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	2.6	ug/l	UJ
67-72-1	Hexachloroethane	ND	5.2	0.46	ug/l	UJ
78-59-1	Isophorone	ND	5.2	0.21	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.29	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.52	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.5	ug/l	
98-95-3	Nitrobenzene	ND	5.2	0.26	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	0.52	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	0.84	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	0.56	ug/l	
110-86-1	Pyridine	ND	10	0.54	ug/l	UJ

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	34%	19%	15-110%
4165-62-2	Phenol-d5	29%	18%	15-110%
118-79-6	2,4,6-Tribromophenol	94%	54%	15-110%
4165-60-0	Nitrobenzene-d5	67%	39%	30-130%
321-60-8	2-Fluorobiphenyl	63%	40%	30-130%
1718-51-0	Terphenyl-d14	90%	54%	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

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-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I87382.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.61	0.10	0.072	ug/l	
208-96-8	Acenaphthylene	0.18	0.10	0.052	ug/l	
120-12-7	Anthracene	ND	0.10	0.096	ug/l	
56-55-3	Benzo(a)anthracene	0.035	0.052	0.020	ug/l	J
50-32-8	Benzo(a)pyrene	0.047	0.10	0.030	ug/l	J
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	0.079	0.10	0.025	ug/l	J
53-70-3	Dibenzo(a,b)anthracene	ND	0.10	0.033	ug/l	
206-44-0	Fluoranthene	0.058	0.10	0.042	ug/l	J
86-73-7	Fluorene	1.1	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	35.3	0.21	0.052	ug/l	
91-57-6	2-Methylnaphthalene	47.4	0.21	0.077	ug/l	
85-01-8	Phenanthrene	0.69	0.052	0.013	ug/l	
129-00-0	Pyrene	0.14	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		30-130%
321-60-8	2-Fluorobiphenyl	61%		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:	P58-ROX-020314		
Lab Sample ID:	MC28118-4	Date Sampled:	02/03/14
Matrix:	AQ - Ground Water	Date Received:	02/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54247.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 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	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	128%		36-173%
460-00-4	Bromofluorobenzene (S)	122%		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-020314-HCL		
Lab Sample ID:	MC28118-5	Date Sampled:	02/03/14
Matrix:	AQ - Trip Blank Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V27810.D	1	02/11/14	AMY	n/a	n/a	MSV1048
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-020314-HCL		
Lab Sample ID:	MC28118-5	Date Sampled:	02/03/14
Matrix:	AQ - Trip Blank Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	traus-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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 metbod blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-ROX-020314-HCL		
Lab Sample ID:	MC28118-5	Date Sampled:	02/03/14
Matrix:	AQ - Trip Blank Water	Date Received:	02/05/14
Method:	SW846 8260C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	96%		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-020314-ST		
Lab Sample ID:	MC28118-6	Date Sampled:	02/03/14
Matrix:	AQ - Trip Blank Water	Date Received:	02/05/14
Method:	SW846 8011 SW846 8011	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB54248.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
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	0.0053	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	126%		36-173%
460-00-4	Bromofluorobenzene (S)	128%		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

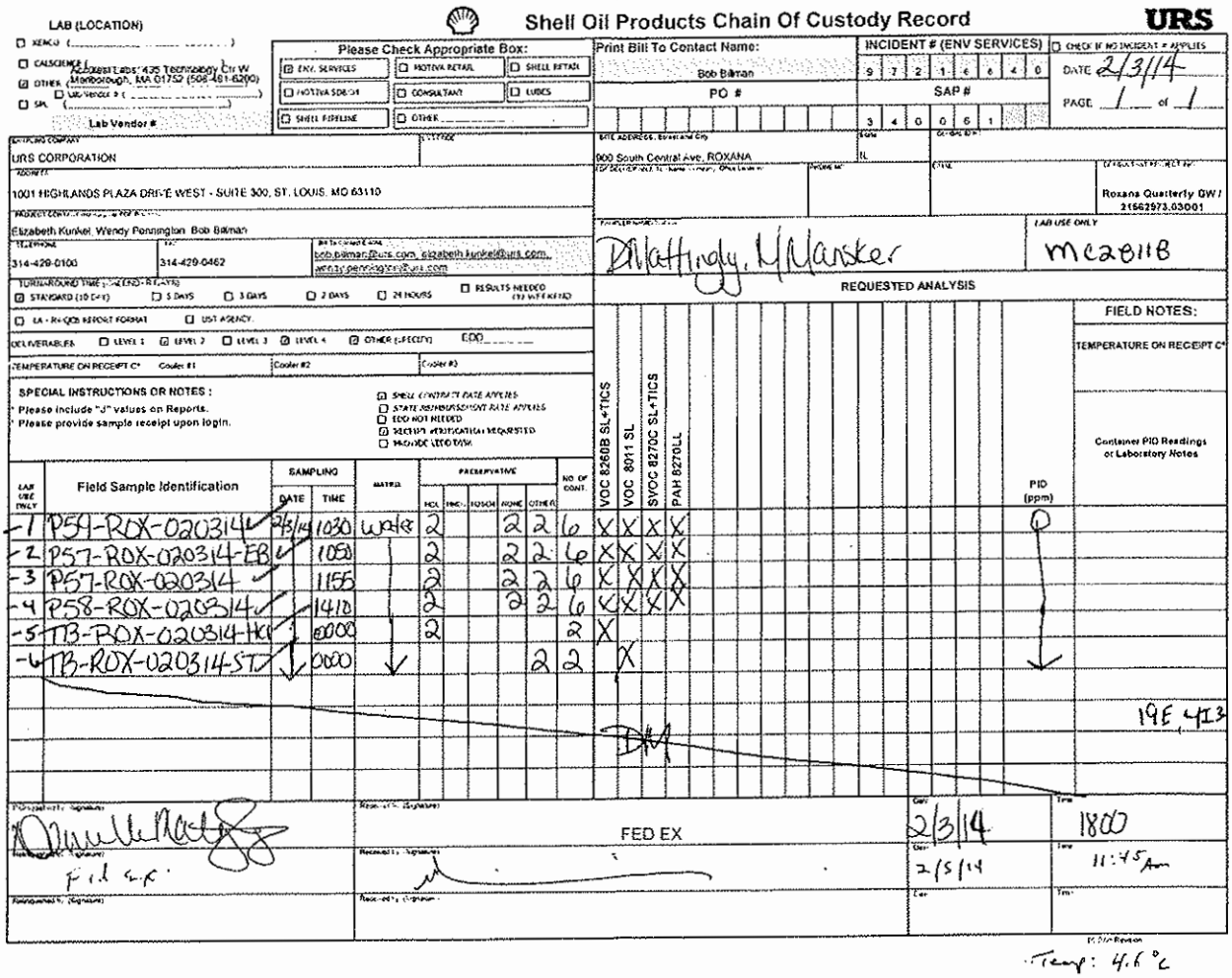
Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ XENCO ( )
☐ CALSCIENCE ( )
☑ OTHER (Accutest Labs: 435 Technology Ctr 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 SDB/OI ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Bob Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0

SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES

DATE 2/3/14

PAGE 1 of 1

SAMPLING COMPANY: URS CORPORATION

LOCATION: 900 South Central Ave, ROXANA

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110

PROJECT CONTACT: Elizabeth Kunkel, Wendy Pennington, Bob Billman

TELEPHONE: 314-429-0100 FAX: 314-429-0462

BILL TO CONTACT: bob.billman@urs.com, elizabeth.kunkel@urs.com, wendy.pennington@urs.com

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (10 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED (TO 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 REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE EDD TASK

BILL ADDRESS: 900 South Central Ave, ROXANA

STATE: IL

CONTACT: Roxana Quarterly GW / 21562973.03001

TEMPERATURE ON RECEIPT C°: DMattingly, MMansker

LAB USE ONLY: MC28118

REQUESTED ANALYSIS

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	PRESERVATIVE HNO3	PRESERVATIVE TOSCH	PRESERVATIVE NONE	PRESERVATIVE OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	P59-ROX-020314	2/3/14	1030	water	2			2	2	6	X	X	X	X	0	
-2	P57-ROX-020314-EB		1050		2			2	2	6	X	X	X	X		
-3	P57-ROX-020314		1155		2			2	2	6	X	X	X	X		
-4	P58-ROX-020314		1410		2			2	2	6	X	X	X	X		
-5	TB-ROX-020314-HCl		0000		2					2	X					
-6	TB-ROX-020314-ST		0000						2	2		X				

19E, 4I3

DM

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FED EX	2/3/14	1800
Fed Ex	[signature]	2/5/14	11:45 Am

Temp: 4.6 °C

5.1

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MC28118: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC28118 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 2/5/2014 **Delivery Method:** **Client Service Action Required at Login:** No

Project: ROXANA,IL/21562973 **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 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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MC28118: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28118

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28118-1 Collected: 03-FEB-14 10:30 By: DMMM Received: 05-FEB-14 By: BA P59-ROX-020314						
MC28118-1	SW846 8011	07-FEB-14 13:37	CZ	06-FEB-14	NE	V8011SL
MC28118-1	SW846 8270D	10-FEB-14 14:41	WK	07-FEB-14	PA	AB8270SL+
MC28118-1	SW846 8270D BY SIM	10-FEB-14 16:17	MR	07-FEB-14	PA	B8270SIMSL
MC28118-1	SW846 8260C	11-FEB-14 12:31	AMY			V8260SL+
MC28118-1	SW846 8260C	11-FEB-14 13:50	AMY			V8260SL+
MC28118-1	SW846 8270D	14-FEB-14 20:02	KR	07-FEB-14	PA	AB8270SL+
MC28118-2 Collected: 03-FEB-14 10:50 By: DMMM Received: 05-FEB-14 By: BA P57-ROX-020314-EB						
MC28118-2	SW846 8011	07-FEB-14 14:01	CZ	06-FEB-14	NE	V8011SL
MC28118-2	SW846 8270D	10-FEB-14 15:04	WK	07-FEB-14	PA	AB8270SL+
MC28118-2	SW846 8270D BY SIM	10-FEB-14 16:40	MR	07-FEB-14	PA	B8270SIMSL
MC28118-2	SW846 8260C	11-FEB-14 12:05	AMY			V8260SL+
MC28118-3 Collected: 03-FEB-14 11:55 By: DMMM Received: 05-FEB-14 By: BA P57-ROX-020314						
MC28118-3	SW846 8011	07-FEB-14 14:24	CZ	06-FEB-14	NE	V8011SL
MC28118-3	SW846 8270D	10-FEB-14 15:26	WK	07-FEB-14	PA	AB8270SL+
MC28118-3	SW846 8270D BY SIM	10-FEB-14 17:02	MR	07-FEB-14	PA	B8270SIMSL
MC28118-3	SW846 8260C	11-FEB-14 12:58	AMY			V8260SL+
MC28118-4 Collected: 03-FEB-14 14:10 By: DMMM Received: 05-FEB-14 By: BA P58-ROX-020314						
MC28118-4	SW846 8011	07-FEB-14 15:13	CZ	06-FEB-14	NE	V8011SL
MC28118-4	SW846 8270D	10-FEB-14 15:49	WK	07-FEB-14	PA	AB8270SL+
MC28118-4	SW846 8270D BY SIM	10-FEB-14 17:25	MR	07-FEB-14	PA	B8270SIMSL
MC28118-4	SW846 8260C	11-FEB-14 13:24	AMY			V8260SL+
MC28118-4	SW846 8260C	11-FEB-14 14:17	AMY			V8260SL+
MC28118-4	SW846 8270D	14-FEB-14 20:26	KR	07-FEB-14	PA	AB8270SL+
MC28118-5 Collected: 03-FEB-14 00:00 By: DMMM Received: 05-FEB-14 By: BA TB-ROX-020314-HCL						
MC28118-5	SW846 8260C	11-FEB-14 11:38	AMY			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28118

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28118-6 Collected: 03-FEB-14 00:00 By: DMMM Received: 05-FEB-14 By: BA TB-ROX-020314-ST						
MC28118-6	SW846 8011	07-FEB-14 15:37	CZ	06-FEB-14	NE	V8011SL

Accutest Internal Chain of Custody

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 02/05/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28118-1.1	Walk In Ref #22	Michael DiBuono	02/07/14 08:40	Retrieve from Storage
MC28118-1.3	VOC Ref #4	Nicole Estey	02/06/14 19:11	Retrieve from Storage
MC28118-1.3	Nicole Estey	VOC Ref #4	02/07/14 20:45	Return to Storage
MC28118-1.6	VOC Ref #4	Amy Min Yang	02/11/14 11:16	Retrieve from Storage
MC28118-1.6	Amy Min Yang	GCMSV	02/11/14 11:17	Load on Instrument
MC28118-1.6	GCMSV	Amy Min Yang	02/12/14 11:22	Unload from Instrument
MC28118-1.6	Amy Min Yang	VOC Ref #4	02/12/14 11:22	Return to Storage
MC28118-2.2	Walk In Ref #22	Michael DiBuono	02/07/14 08:40	Retrieve from Storage
MC28118-2.3	VOC Ref #4	Nicole Estey	02/06/14 19:11	Retrieve from Storage
MC28118-2.3	Nicole Estey	VOC Ref #4	02/07/14 20:45	Return to Storage
MC28118-2.5	VOC Ref #4	Amy Min Yang	02/11/14 11:16	Retrieve from Storage
MC28118-2.5	Amy Min Yang	GCMSV	02/11/14 11:17	Load on Instrument
MC28118-2.5	GCMSV	Amy Min Yang	02/12/14 11:22	Unload from Instrument
MC28118-2.5	Amy Min Yang	VOC Ref #4	02/12/14 11:22	Return to Storage
MC28118-3.1	Walk In Ref #22	Michael DiBuono	02/07/14 08:40	Retrieve from Storage
MC28118-3.3	VOC Ref #4	Nicole Estey	02/06/14 19:11	Retrieve from Storage
MC28118-3.3	Nicole Estey	VOC Ref #4	02/07/14 20:45	Return to Storage
MC28118-3.5	VOC Ref #4	Amy Min Yang	02/11/14 11:16	Retrieve from Storage
MC28118-3.5	Amy Min Yang	GCMSV	02/11/14 11:17	Load on Instrument
MC28118-3.5	GCMSV	Amy Min Yang	02/12/14 11:22	Unload from Instrument
MC28118-3.5	Amy Min Yang	VOC Ref #4	02/12/14 11:22	Return to Storage
MC28118-4.1	Walk In Ref #22	Michael DiBuono	02/07/14 08:40	Retrieve from Storage
MC28118-4.3	VOC Ref #4	Nicole Estey	02/06/14 19:11	Retrieve from Storage
MC28118-4.3	Nicole Estey	VOC Ref #4	02/07/14 20:45	Return to Storage
MC28118-4.5	VOC Ref #4	Amy Min Yang	02/11/14 11:16	Retrieve from Storage
MC28118-4.5	Amy Min Yang	GCMSV	02/11/14 11:17	Load on Instrument
MC28118-4.5	GCMSV	Amy Min Yang	02/12/14 11:22	Unload from Instrument
MC28118-4.5	Amy Min Yang	VOC Ref #4	02/12/14 11:22	Return to Storage
MC28118-5.1	VOC Ref #4	Amy Min Yang	02/11/14 11:16	Retrieve from Storage
MC28118-5.1	Amy Min Yang	GCMSV	02/11/14 11:17	Load on Instrument
MC28118-5.1	GCMSV	Amy Min Yang	02/12/14 11:22	Unload from Instrument
MC28118-5.1	Amy Min Yang	VOC Ref #4	02/12/14 11:22	Return to Storage

Accutest Internal Chain of Custody

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 02/05/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28118-6.1	VOC Ref #4	Nicole Estey	02/06/14 19:11	Retrieve from Storage
MC28118-6.1	Nicole Estey	VOC Ref #4	02/07/14 20:45	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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-MB	V27809.D	1	02/11/14	AMY	u/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	4.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.77	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	3.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-MB	V27809.D	1	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	3.9	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.91	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-MB	V27809.D	1	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	70-130%
2037-26-5	Toluene-D8	96%	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	

6.1.1

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-BS	V27806.D	1	02/11/14	AMY	n/a	n/a	MSV1048
MSV1048-BSD	V27807.D	1	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	38.0	76	37.3	75	2	70-130/25
107-02-8	Acrolein	50	55.2	110	55.1	110	0	70-130/25
107-13-1	Acrylonitrile	100	79.4	79	83.6	84	5	70-130/25
71-43-2	Benzene	50	50.1	100	48.3	97	4	70-130/25
108-86-1	Bromobenzene	50	53.9	108	52.9	106	2	70-130/25
74-97-5	Bromochloromethane	50	49.4	99	49.1	98	1	70-130/25
75-27-4	Bromodichloromethane	50	51.5	103	50.2	100	3	70-130/25
75-25-2	Bromoform	50	41.1	82	41.1	82	0	70-130/25
74-83-9	Bromomethane	50	47.4	95	45.9	92	3	70-130/25
78-93-3	2-Butanone (MEK)	50	38.8	78	40.6	81	5	70-130/25
104-51-8	n-Butylbenzene	50	58.2	116	56.2	112	3	70-130/25
135-98-8	sec-Butylbenzene	50	59.9	120	57.6	115	4	70-130/25
98-06-6	tert-Butylbenzene	50	57.2	114	55.4	111	3	70-130/25
75-15-0	Carbon disulfide	50	41.9	84	39.5	79	6	70-130/25
56-23-5	Carbon tetrachloride	50	50.3	101	47.0	94	7	70-130/25
108-90-7	Chlorobenzene	50	45.8	92	44.4	89	3	70-130/25
75-00-3	Chloroethane	50	57.3	115	55.0	110	4	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	190	380* [a]	86.5	173* [a]	75* [a]	70-130/25
67-66-3	Chloroform	50	47.6	95	46.6	93	2	70-130/25
74-87-3	Chloromethane	50	48.4	97	46.2	92	5	70-130/25
95-49-8	o-Chlorotoluene	50	53.9	108	52.2	104	3	70-130/25
106-43-4	p-Chlorotoluene	50	54.5	109	52.9	106	3	70-130/25
124-48-1	Dibromochloromethane	50	53.0	106	52.9	106	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	50.1	100	48.9	98	2	70-130/25
541-73-1	1,3-Dichlorobenzene	50	50.8	102	49.4	99	3	70-130/25
106-46-7	1,4-Dichlorobenzene	50	50.3	101	49.5	99	2	70-130/25
75-71-8	Dichlorodifluoromethane	50	42.5	85	41.5	83	2	70-130/25
75-34-3	1,1-Dichloroethane	50	49.6	99	48.6	97	2	70-130/25
107-06-2	1,2-Dichloroethane	50	46.1	92	45.6	91	1	70-130/25
75-35-4	1,1-Dichloroethene	50	47.9	96	46.8	94	2	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	50.8	102	50.2	100	1	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	48.8	98	47.2	94	3	70-130/25
78-87-5	1,2-Dichloropropane	50	49.3	99	48.3	97	2	70-130/25
142-28-9	1,3-Dichloropropane	50	49.5	99	48.8	98	1	70-130/25
594-20-7	2,2-Dichloropropane	50	57.6	115	54.4	109	6	70-130/25
563-58-6	1,1-Dichloropropene	50	48.6	97	46.6	93	4	70-130/25

* = Outside of Control Limits.

6.2.1

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-BS	V27806.D	1	02/11/14	AMY	n/a	n/a	MSV1048
MSV1048-BSD	V27807.D	1	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

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	46.2	92	45.3	91	2	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	47.2	94	47.0	94	0	70-130/25
123-91-1	1,4-Dioxane	250	221	88	233	93	5	70-130/25
97-63-2	Ethyl methacrylate	50	45.3	91	46.6	93	3	77-137/25
100-41-4	Ethylbenzene	50	52.2	104	50.2	100	4	70-130/25
87-68-3	Hexachlorobutadiene	50	56.7	113	55.4	111	2	70-130/25
591-78-6	2-Hexanone	50	38.7	77	40.1	80	4	70-130/25
98-82-8	Isopropylbenzene	50	61.2	122	58.8	118	4	70-130/25
99-87-6	p-Isopropyltoluene	50	57.7	115	55.6	111	4	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	53.4	107	53.4	107	0	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.2	100	52.6	105	5	70-130/25
74-95-3	Methylene bromide	50	47.0	94	46.7	93	1	70-130/25
75-09-2	Methylene chloride	50	46.3	93	45.6	91	2	70-130/25
91-20-3	Naphthalene	50	51.7	103	56.9	114	10	70-130/25
103-65-1	n-Propylbenzene	50	58.0	116	56.3	113	3	70-130/25
100-42-5	Styrene	50	48.4	97	47.2	94	3	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	51.0	102	49.3	99	3	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	52.9	106	54.7	109	3	70-130/25
127-18-4	Tetrachloroethene	50	50.9	102	48.8	98	4	70-130/25
108-88-3	Toluene	50	53.0	106	51.3	103	3	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	58.0	116	60.7	121	5	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	60.6	121	60.9	122	0	70-130/25
71-55-6	1,1,1-Trichloroethane	50	51.9	104	49.4	99	5	70-130/25
79-00-5	1,1,2-Trichloroethane	50	49.6	99	49.3	99	1	70-130/25
79-01-6	Trichloroethene	50	50.4	101	48.3	97	4	70-130/25
75-69-4	Trichlorofluoromethane	50	53.1	106	50.1	100	6	70-130/25
96-18-4	1,2,3-Trichloropropane	50	53.1	106	55.1	110	4	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	58.6	117	56.4	113	4	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	59.1	118	57.1	114	3	70-130/25
108-05-4	Vinyl Acetate	50	49.9	100	50.4	101	1	70-130/25
75-01-4	Vinyl chloride	50	46.5	93	45.1	90	3	70-130/25
	m,p-Xylene	100	87.8	88	85.4	85	3	70-130/25
95-47-6	o-Xylene	50	44.8	90	43.1	86	4	70-130/25
1330-20-7	Xylene (total)	150	133	89	129	86	3	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1048-BS	V27806.D	1	02/11/14	AMY	n/a	n/a	MSV1048
MSV1048-BSD	V27807.D	1	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	97%	70-130%
2037-26-5	Toluene-D8	98%	98%	70-130%
460-00-4	4-Bromofluorohenzene	102%	103%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.

6.2.1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28118-3MS	V27817.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3MSD	V27818.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3	V27813.D	1000	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Compound	MC28118-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50000	25600	51* a	27600	55* a	8	70-130/30
107-02-8	Acrolein	ND		50000	42700	85	42000	84	2	70-130/30
107-13-1	Acrylonitrile	ND		100000	79400	79	76400	76	4	70-130/30
71-43-2	Benzene	261000		50000	296000	70	297000	72	0	70-130/30
108-86-1	Bromobenzene	ND		50000	52900	106	53600	107	1	70-130/30
74-97-5	Bromocbloromethane	ND		50000	48500	97	48800	98	1	70-130/30
75-27-4	Bromodichloromethane	ND		50000	51600	103	51800	104	0	70-130/30
75-25-2	Bromoform	ND		50000	40600	81	40100	80	1	70-130/30
74-83-9	Bromomethane	ND		50000	45500	91	46200	92	2	70-130/30
78-93-3	2-Butanone (MEK)	ND		50000	32600	65* a	32500	65* a	0	70-130/30
104-51-8	n-Butylbenzene	ND		50000	56800	114	58000	116	2	70-130/30
135-98-8	sec-Butylbenzene	ND		50000	58500	117	59600	119	2	70-130/30
98-06-6	tert-Butylbenzene	ND		50000	58100	116	59100	118	2	70-130/30
75-15-0	Carbon disulfide	ND		50000	40200	80	41000	82	2	70-130/30
56-23-5	Carbon tetrachloride	ND		50000	49400	99	48800	98	1	70-130/30
108-90-7	Chlorobenzene	ND		50000	45000	90	45500	91	1	70-130/30
75-00-3	Chloroethane	ND		50000	54900	110	54600	109	1	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		50000	53200	106	46100	92	14	70-130/30
67-66-3	Chloroform	ND		50000	47900	96	48100	96	0	70-130/30
74-87-3	Chloromethane	ND		50000	51200	102	47100	94	8	70-130/30
95-49-8	o-Chlorotoluene	ND		50000	51900	104	53600	107	3	70-130/30
106-43-4	p-Chlorotoluene	ND		50000	53500	107	54300	109	1	70-130/30
124-48-1	Dibromochloromethane	ND		50000	53000	106	53000	106	0	70-130/30
95-50-1	1,2-Dicblorobenzene	ND		50000	48400	97	49500	99	2	70-130/30
541-73-1	1,3-Dicblorobenzene	ND		50000	49000	98	50400	101	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		50000	48900	98	50000	100	2	70-130/30
75-71-8	Dichlorodifluorometbane	ND		50000	46700	93	45700	91	2	70-130/30
75-34-3	1,1-Dichloroethane	ND		50000	48900	98	49300	99	1	70-130/30
107-06-2	1,2-Dichloroethane	ND		50000	47800	96	47700	95	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		50000	47200	94	47800	96	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		50000	49900	100	50100	100	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		50000	47600	95	48000	96	1	70-130/30
78-87-5	1,2-Dichloropropane	ND		50000	48700	97	49200	98	1	70-130/30
142-28-9	1,3-Dichloropropane	ND		50000	48600	97	49000	98	1	70-130/30
594-20-7	2,2-Dichloropropane	ND		50000	55600	111	55200	110	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		50000	47000	94	46800	94	0	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28118-3MS	V27817.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3MSD	V27818.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3	V27813.D	1000	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Compound	MC28118-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		50000	44700	89	45100	90	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		50000	46500	93	46600	93	0	70-130/30
123-91-1	1,4-Dioxane	ND		250000	212000	85	208000	83	2	70-130/30
97-63-2	Ethyl methacrylate	ND		50000	44100	88	43700	87	1	72-139/30
100-41-4	Ethylbenzene	697	J	50000	52300	103	52400	103	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		50000	53700	107	56400	113	5	70-130/30
591-78-6	2-Hexanone	ND		50000	35500	71	34200	68* [a]	4	70-130/30
98-82-8	Isopropylbenzene	ND		50000	59000	118	60300	121	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		50000	55800	112	56900	114	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50000	50300	101	50200	100	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50000	48200	96	47200	94	2	70-130/30
74-95-3	Methylene bromide	ND		50000	46900	94	46500	93	1	70-130/30
75-09-2	Methylene chloride	ND		50000	45300	91	45600	91	1	70-130/30
91-20-3	Naphthalene	ND		50000	43700	87	49400	99	12	70-130/30
103-65-1	n-Propylbenzene	ND		50000	56400	113	57200	114	1	70-130/30
100-42-5	Styrene	ND		50000	47600	95	48300	97	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50000	50400	101	51000	102	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50000	50900	102	51500	103	1	70-130/30
127-18-4	Tetrachloroethene	ND		50000	49900	100	50300	101	1	70-130/30
108-88-3	Toluene	ND		50000	51800	104	51900	104	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		50000	49400	99	56200	112	13	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		50000	54600	109	58800	118	7	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		50000	51600	103	51100	102	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		50000	48400	97	48300	97	0	70-130/30
79-01-6	Trichloroethene	ND		50000	49400	99	49500	99	0	70-130/30
75-69-4	Trichlorofluoromethane	ND		50000	53500	107	51700	103	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		50000	52600	105	52800	106	0	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		50000	57100	114	58500	117	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		50000	57800	116	59000	118	2	70-130/30
108-05-4	Vinyl Acetate	ND		50000	49700	99	49400	99	1	70-130/30
75-01-4	Vinyl chloride	ND		50000	45200	90	44200	88	2	70-130/30
	m,p-Xylene	ND		100000	86600	87	87600	88	1	70-130/30
95-47-6	o-Xylene	ND		50000	43800	88	44000	88	0	70-130/30
1330-20-7	Xylene (total)	ND		150000	130000	87	132000	88	2	70-130/30

* = Outside of Control Limits.

6.3.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC28118-3MS	V27817.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3MSD	V27818.D	1000	02/11/14	AMY	n/a	n/a	MSV1048
MC28118-3	V27813.D	1000	02/11/14	AMY	n/a	n/a	MSV1048

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

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-5

CAS No.	Surrogate Recoveries	MS	MSD	MC28118-3	Limits
1868-53-7	Dibromofluoromethane	98%	97%	103%	70-130%
2037-26-5	Toluene-D8	97%	97%	94%	70-130%
460-00-4	4-Bromofluorobenzene	101%	101%	105%	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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSV1048-CC1019	Injection Date:	02/11/14
Lab File ID:	V27805.D	Injection Time:	09:26
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	586268	6.54	757769	7.73	400601	11.06	410399	13.28	I96686	3.50
Upper Limit [a]	1172536	7.04	1515538	8.23	801202	11.56	820798	13.78	393372	4.00
Lower Limit [b]	293134	6.04	378885	7.23	200301	10.56	205200	12.78	98343	3.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV1048-BS	595785	6.54	767989	7.72	406940	11.06	420280	13.28	186140	3.50
MSV1048-BSD	597754	6.55	783691	7.73	415869	11.07	426497	13.28	209724	3.51
MSV1048-MB	517549	6.54	714753	7.73	378655	11.06	353518	13.28	174117	3.50
MC28118-5	545511	6.55	742240	7.73	395395	11.07	364753	13.28	149205	3.51
MC28118-2	542456	6.55	702645	7.73	360645	11.07	340087	13.28	251708	3.50
MC28118-1	479340	6.55	662819	7.73	348090	11.07	335884	13.28	177227	3.50
MC28118-3	499094	6.55	701596	7.73	364703	11.07	342227	13.28	148484	3.51
MC28118-4	462396	6.54	663667	7.73	339678	11.07	321217	13.28	127023	3.50
MC28118-1	531334	6.55	712885	7.73	363198	11.07	358439	13.28	163383	3.51
MC28118-4	462552	6.55	654541	7.73	342216	11.07	325297	13.28	162293	3.51
MC28118-3MS	590513	6.55	779458	7.73	411428	11.07	431599	13.28	177728	3.51
MC28118-3MSD	560896	6.55	737931	7.73	388377	11.07	400591	13.28	153603	3.50
ZZZZZZ	549407	6.55	718656	7.73	394458	11.07	381137	13.28	149771	3.50
ZZZZZZ	522512	6.55	700310	7.73	372986	11.07	377678	13.28	175917	3.50
ZZZZZZ	529417	6.55	719249	7.73	378854	11.07	359859	13.28	184058	3.50
ZZZZZZ	509479	6.55	668549	7.73	351658	11.07	326339	13.28	151606	3.50
ZZZZZZ	504721	6.55	658246	7.73	341475	11.06	316870	13.28	132927	3.50
ZZZZZZ	494343	6.54	646420	7.72	340403	11.06	321720	13.28	148597	3.50
ZZZZZZ	518179	6.55	674542	7.73	362367	11.06	336307	13.28	170916	3.50
ZZZZZZ	460453	6.54	604479	7.73	323474	11.06	300510	13.28	143705	3.50
ZZZZZZ	469745	6.54	611641	7.72	329195	11.06	306322	13.28	140307	3.50
ZZZZZZ	462648	6.54	599047	7.72	326573	11.06	301854	13.28	156318	3.50
ZZZZZZ	474286	6.54	651955	7.73	355870	11.06	332369	13.28	159199	3.50
ZZZZZZ	426586	6.53	557367	7.72	305509	11.06	281205	13.28	141526	3.49

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28118-1	V27815.D	95.0	96.0	106.0
MC28118-1	V27812.D	104.0	96.0	105.0
MC28118-2	V27811.D	98.0	95.0	104.0
MC28118-3	V27813.D	103.0	94.0	105.0
MC28118-4	V27816.D	106.0	95.0	103.0
MC28118-4	V27814.D	106.0	94.0	104.0
MC28118-5	V27810.D	102.0	96.0	106.0
MC28118-3MS	V27817.D	98.0	97.0	101.0
MC28118-3MSD	V27818.D	97.0	97.0	101.0
MSV1048-BS	V27806.D	96.0	98.0	102.0
MSV1048-BSD	V27807.D	97.0	98.0	103.0
MSV1048-MB	V27809.D	103.0	96.0	105.0

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

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-MB	R37020.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophenol	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	0.55	5.0	0.39	ug/l	J
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phtbalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Etbylhexyl)phthalate	2.6	2.0	0.49	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-MB	R37020.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	31%	15-110%
4165-62-2	Phenol-d5	23%	15-110%
118-79-6	2,4,6-Tribromophenol	69%	15-110%
4165-60-0	Nitrobenzene-d5	67%	30-130%
321-60-8	2-Fluorobiphenyl	54%	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	

Method Blank Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36791-MB	I87368.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28118-1, MC28118-2, MC28118-3, MC28118-4

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	0.20	0.050	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	0.074	ug/l	
85-01-8	Phenanthrene	0.018	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	63%	30-130%
321-60-8	2-Fluorobiphenyl	53%	30-130%
1718-51-0	Terphenyl-d14	86%	30-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-BS	R37021.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
OP36790-BSD	R37022.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	50	13.5	27* a	12.5	25* a	8	30-130/20
95-57-8	2-Chlorophenol	50	33.8	68	31.8	64	6	30-130/20
59-50-7	4-Chloro-3-methyl phenol	50	40.7	81	39.2	78	4	30-130/20
120-83-2	2,4-Dichlorophenol	50	38.3	77	37.2	74	3	30-130/20
105-67-9	2,4-Dimethylphenol	50	34.7	69	32.5	65	7	30-130/20
51-28-5	2,4-Dinitrophenol	50	29.6	59	30.2	60	2	30-130/20
534-52-1	4,6-Dinitro-o-cresol	50	41.8	84	41.8	84	0	30-130/20
95-48-7	2-Methylphenol	50	31.8	64	29.9	60	6	30-130/20
	3&4-Methylphenol	100	58.7	59	54.9	55	7	30-130/20
88-75-5	2-Nitrophenol	50	37.9	76	36.3	73	4	30-130/20
100-02-7	4-Nitrophenol	50	15.6	31	15.6	31	0	30-130/20
87-86-5	Pentachlorophenol	50	37.6	75	38.1	76	1	30-130/20
108-95-2	Phenol	50	17.8	36	13.7	27* a	26* a	30-130/20
95-95-4	2,4,5-Trichlorophenol	50	40.0	80	39.4	79	2	30-130/20
88-06-2	2,4,6-Trichlorophenol	50	38.2	76	36.5	73	5	30-130/20
62-53-3	Aniline	50	25.1	50	23.6	47	6	40-140/20
101-55-3	4-Bromophenyl phenyl ether	50	44.1	88	43.6	87	1	40-140/20
85-68-7	Butyl benzyl phthalate	50	46.4	93	47.0	94	1	40-140/20
100-51-6	Benzyl Alcohol	50	28.2	56	26.9	54	5	40-140/20
91-58-7	2-Chloronaphthalene	50	36.0	72	34.8	70	3	40-140/20
106-47-8	4-Chloroaniline	50	35.2	70	33.2	66	6	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	50	37.6	75	35.8	72	5	40-140/20
111-44-4	bis(2-Chloroethyl)ether	50	37.2	74	34.5	69	8	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	50	36.5	73	33.6	67	8	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	50	44.4	89	42.7	85	4	40-140/20
122-66-7	1,2-Diphenylhydrazine	50	43.8	88	43.2	86	1	40-140/20
121-14-2	2,4-Dinitrotoluene	50	44.0	88	43.6	87	1	40-140/20
606-20-2	2,6-Dinitrotoluene	50	41.0	82	39.1	78	5	40-140/20
91-94-1	3,3'-Dichlorobenzidine	50	44.9	90	46.1	92	3	40-140/20
132-64-9	Dibenzofnran	50	39.6	79	38.0	76	4	40-140/20
84-74-2	Di-n-butyl phthalate	50	44.6	89	42.9	86	4	40-140/20
117-84-0	Di-n-octyl phthalate	50	49.9	100	49.3	99	1	40-140/20
84-66-2	Diethyl phthalate	50	38.5	77	37.8	76	2	40-140/20
131-11-3	Dimethyl phthalate	50	25.2	50	25.3	51	0	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	50	48.3	97	48.3	97	0	40-140/20
118-74-1	Hexachlorobenzene	50	46.4	93	45.7	91	2	40-140/20

* = Outside of Control Limits.

7.2.1

7

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-BS	R37021.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
OP36790-BSD	R37022.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	50	9.6	19* [a]	10.2	20* [a]	6	40-140/20
67-72-1	Hexachloroethane	50	17.6	35* [a]	17.5	35* [a]	1	40-140/20
78-59-1	Isophorone	50	42.4	85	40.0	80	6	40-140/20
88-74-4	2-Nitroaniline	50	40.9	82	39.3	79	4	40-140/20
99-09-2	3-Nitroaniline	50	38.1	76	37.3	75	2	40-140/20
100-01-6	4-Nitroaniline	50	40.4	81	39.6	79	2	40-140/20
98-95-3	Nitrobenzene	50	41.3	83	38.6	77	7	40-140/20
62-75-9	n-Nitrosodimethylamine	50	24.4	49	21.7	43	12	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	50	44.4	89	41.1	82	8	40-140/20
86-30-6	N-Nitrosodiphenylamine	50	41.2	82	40.8	82	1	40-140/20
110-86-1	Pyridine	50	18.7	37* [a]	17.7	35* [a]	5	40-140/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	42%	37%	15-110%
4165-62-2	Phenol-d5	31%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	91%	87%	15-110%
4165-60-0	Nitrobenzene-d5	85%	79%	30-130%
321-60-8	2-Fluorobiphenyl	71%	67%	30-130%
1718-51-0	Terphenyl-d14	94%	93%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36791-BS	I87369.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
OP36791-BSD	I87370.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	37.5	75	36.4	73	3	40-140/30
208-96-8	Acenaphthylene	50	31.2	62	30.3	61	3	40-140/30
120-12-7	Anthracene	50	38.7	77	38.1	76	2	40-140/30
56-55-3	Benzo(a)anthracene	50	47.5	95	46.6	93	2	40-140/30
50-32-8	Benzo(a)pyrene	50	43.7	87	42.6	85	3	40-140/30
205-99-2	Benzo(b)fluoranthene	50	48.4	97	45.9	92	5	40-140/30
191-24-2	Benzo(g,h,i)perylene	50	50.1	100	48.9	98	2	40-140/30
207-08-9	Benzo(k)fluoranthene	50	44.0	88	43.9	88	0	40-140/30
218-01-9	Chrysene	50	45.5	91	44.2	88	3	40-140/30
53-70-3	Dibenzo(a,h)anthracene	50	51.6	103	50.1	100	3	40-140/30
206-44-0	Fluoranthene	50	44.4	89	44.0	88	1	40-140/30
86-73-7	Fluorene	50	39.2	78	38.5	77	2	40-140/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	51.0	102	49.6	99	3	40-140/30
90-12-0	1-Methylnaphthalene	50	30.4	61	29.3	59	4	40-140/30
91-57-6	2-Methylnaphthalene	50	29.3	59	28.5	57	3	40-140/30
85-01-8	Phenanthrene	50	39.2	78	38.9	78	1	40-140/30
129-00-0	Pyrene	50	43.8	88	43.2	86	1	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	78%	73%	30-130%
321-60-8	2-Fluorobiphenyl	68%	66%	30-130%
1718-51-0	Terphenyl-d14	91%	87%	30-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-MS	R37023.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
OP36790-MSD	R37024.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
MC28000-20	R37025.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

CAS No.	Compound	MC28000-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	13.8	28* [a]	14.5	29* [a]	5	30-130/20
95-57-8	2-Chlorophenol	ND		50	34.4	69	35.0	70	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	41.4	83	40.4	81	2	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	40.5	81	39.5	79	3	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	35.1	70	33.4	67	5	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	31.3	63	34.6	69	10	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	43.2	86	45.4	91	5	30-130/20
95-48-7	2-Methylphenol	ND		50	32.5	65	32.2	64	1	30-130/20
	3&4-Methylphenol	ND		100	59.8	60	59.2	59	1	30-130/20
88-75-5	2-Nitrophenol	ND		50	39.2	78	39.4	79	1	30-130/20
100-02-7	4-Nitrophenol	ND		50	15.9	32	16.5	33	4	30-130/20
87-86-5	Pentachlorophenol	ND		50	38.6	77	40.3	81	4	30-130/20
108-95-2	Phenol	ND		50	14.8	30	15.1	30	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	40.9	82	41.0	82	0	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	39.0	78	38.5	77	1	30-130/20
62-53-3	Aniline	ND		50	25.5	51	25.4	51	0	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	44.8	90	45.8	92	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	48.1	96	47.6	95	1	40-140/20
100-51-6	Benzyl Alcohol	ND		50	28.3	57	28.4	57	0	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	38.8	78	37.9	76	2	40-140/20
106-47-8	4-Chloroaniline	ND		50	36.4	73	35.0	70	4	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	39.2	78	37.6	75	4	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	38.1	76	37.2	74	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	37.0	74	36.0	72	3	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	45.5	91	44.7	89	2	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	45.1	90	44.6	89	1	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	44.7	89	45.5	91	2	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	41.6	83	41.5	83	0	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	46.9	94	46.4	93	1	40-140/20
132-64-9	Dibenzofuran	ND		50	40.9	82	40.0	80	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	45.0	90	44.8	90	0	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	51.3	103	51.2	102	0	40-140/20
84-66-2	Diethyl phthalate	ND		50	39.0	78	38.0	76	3	40-140/20
131-11-3	Dimethyl phthalate	ND		50	25.4	51	22.9	46	10	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	50.2	100	49.6	99	1	40-140/20
118-74-1	Hexachlorobenzene	ND		50	47.4	95	46.9	94	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36790-MS	R37023.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
OP36790-MSD	R37024.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365
MC28000-20	R37025.D	1	02/10/14	WK	02/07/14	OP36790	MSR1365

The QC reported here applies to the following samples: Method: SW846 8270D

MC28118-1, MC28118-2, MC28118-3, MC28118-4

7.3.1

7

CAS No.	Compound	MC28000-20 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	12.2	24* [b]	12.4	25* [b]	2	40-140/20
67-72-1	Hexachloroethane	ND		50	21.6	43	20.4	41	6	40-140/20
78-59-1	Isophorone	ND		50	43.3	87	41.8	84	4	40-140/20
88-74-4	2-Nitroaniline	ND		50	41.6	83	41.5	83	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	38.7	77	38.7	77	0	40-140/20
100-01-6	4-Nitroaniline	ND		50	41.6	83	41.5	83	0	40-140/20
98-95-3	Nitrobenzene	ND		50	42.6	85	41.1	82	4	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	24.5	49	23.6	47	4	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	45.1	90	43.9	88	3	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	42.2	84	41.9	84	1	40-140/20
110-86-1	Pyridine	ND		50	19.5	39* [b]	19.9	40	2	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-20	Limits
367-12-4	2-Fluorophenol	41%	42%	37%	15-110%
4165-62-2	Phenol-d5	30%	31%	28%	15-110%
118-79-6	2,4,6-Tribromophenol	90%	94%	75%	15-110%
4165-60-0	Nitrobenzene-d5	86%	86%	76%	30-130%
321-60-8	2-Fluorobiphenyl	77%	76%	66%	30-130%
1718-51-0	Terphenyl-d14	96%	97%	90%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.
(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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36791-MS	I87371.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
OP36791-MSD	I87372.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247
MC28000-21	I87373.D	1	02/10/14	MR	02/07/14	OP36791	MSI3247

The QC reported here applies to the following samples: Method: SW846 8270D BY SIM

MC28118-1, MC28118-2, MC28118-3, MC28118-4

7.3.2

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CAS No.	Compound	MC28000-21 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	38.8	78	38.1	76	2	40-140/20
208-96-8	Acenaphthylene	ND		50	32.4	65	31.9	64	2	40-140/20
120-12-7	Anthracene	ND		50	39.7	79	39.3	79	1	40-140/20
56-55-3	Benzo(a)anthracene	ND		50	48.0	96	47.9	96	0	40-140/20
50-32-8	Benzo(a)pyrene	ND		50	44.6	89	44.7	89	0	40-140/20
205-99-2	Benzo(b)fluoranthene	ND		50	47.4	95	46.6	93	2	40-140/20
191-24-2	Benzo(g,h,i)perylene	ND		50	50.9	102	51.0	102	0	40-140/20
207-08-9	Benzo(k)fluoranthene	ND		50	46.6	93	47.3	95	1	40-140/20
218-01-9	Chrysene	ND		50	45.9	92	45.4	91	1	40-140/20
53-70-3	Dibenzo(a,h)anthracene	ND		50	52.5	105	52.6	105	0	40-140/20
206-44-0	Fluoranthene	ND		50	45.0	90	44.8	90	0	40-140/20
86-73-7	Fluorene	ND		50	40.4	81	39.9	80	1	40-140/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND		50	51.9	104	52.2	104	1	40-140/20
90-12-0	1-Methylnaphthalene	ND		50	32.7	65	32.1	64	2	40-140/20
91-57-6	2-Methylnaphthalene	ND		50	31.8	64	31.0	62	3	40-140/20
85-01-8	Phenanthrene	0.022	J	50	40.2	80	39.6	79	2	40-140/20
129-00-0	Pyrene	ND		50	44.3	89	44.3	89	0	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-21	Limits
4165-60-0	Nitrobenzene-d5	79%	80%	71%	30-130%
321-60-8	2-Fluorobiphenyl	72%	72%	64%	30-130%
1718-51-0	Terphenyl-d14	90%	92%	86%	30-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSI3247-CC3238	Injection Date:	02/10/14
Lab File ID:	I87367.D	Injection Time:	11:44
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	296304	4.39	657574	5.45	362797	6.99	601328	8.42	382825	11.19	1030425	12.70
Upper Limit [a]	592608	4.89	1315148	5.95	725594	7.49	1202656	8.92	765650	11.69	2060850	13.20
Lower Limit [b]	148152	3.89	328787	4.95	181399	6.49	300664	7.92	191413	10.69	515213	12.20
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
OP36791-MB	300247	4.39	656488	5.45	361755	6.99	592479	8.42	376772	11.19	1020558	12.70
OP36791-BS	264638	4.39	590343	5.45	322405	6.99	529307	8.42	334106	11.20	890882	12.70
OP36791-BSD	293349	4.39	648017	5.45	352305	6.99	572878	8.42	364796	11.20	974876	12.70
OP36791-MS	271441	4.39	601265	5.45	329325	6.99	536479	8.42	341670	11.20	905754	12.70
OP36791-MSD	305035	4.39	669877	5.45	361903	6.99	593913	8.42	374598	11.20	972871	12.70
MC28000-21	285286	4.39	627029	5.45	340780	6.99	557779	8.42	352469	11.19	945545	12.70
ZZZZZZ	296595	4.39	653089	5.45	353655	6.99	569444	8.42	359725	11.19	964142	12.70
ZZZZZZ	278699	4.39	612195	5.45	334462	6.99	549230	8.42	348889	11.19	939274	12.70
ZZZZZZ	266963	4.39	582528	5.45	316937	6.99	523636	8.42	330436	11.19	888151	12.70
ZZZZZZ	284936	4.39	614460	5.45	337816	6.99	550234	8.42	349439	11.19	945541	12.70
ZZZZZZ	287597	4.39	618568	5.45	340979	6.99	546234	8.42	346996	11.19	920337	12.70
MC28118-1	300407	4.39	649512	5.45	379932	7.00	577328	8.43	375672	11.20	1011197	12.70
MC28118-2	291290	4.39	642272	5.45	349453	6.99	569254	8.42	366378	11.19	986022	12.70
MC28118-3	296620	4.39	637681	5.45	350397	6.99	573388	8.42	364833	11.19	973417	12.70
MC28118-4	295728	4.39	636708	5.45	342519	6.99	562089	8.42	355797	11.19	943940	12.70
ZZZZZZ	305764	4.39	658186	5.45	362408	6.99	576811	8.42	356767	11.20	941145	12.70
ZZZZZZ	293229	4.39	641636	5.45	347842	6.99	566342	8.42	349741	11.19	931350	12.70
ZZZZZZ	288767	4.39	633428	5.45	347816	6.99	574114	8.42	379981	11.19	969116	12.70

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.

Semivolatile Internal Standard Area Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1365-CC1262	Injection Date:	02/10/14
Lab File ID:	R37013.D	Injection Time:	08:58
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	302010	4.19	1139273	5.24	711428	6.77	1273293	8.06	1459321	10.66	1314302	12.38
Upper Limit [a]	604020	4.69	2278546	5.74	1422856	7.27	2546586	8.56	2918642	11.16	2628604	12.88
Lower Limit [b]	151005	3.69	569637	4.74	355714	6.27	636647	7.56	729661	10.16	657151	11.88
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
OP36777-MB	308143	4.18	1148633	5.24	711131	6.77	1291590	8.06	1325508	10.66	1246068	12.37
OP36777-BS	307631	4.18	1125224	5.24	707466	6.77	1267284	8.06	1415330	10.66	1300729	12.38
OP36777-MS	317611	4.18	1168516	5.24	729701	6.77	1317183	8.06	1465752	10.66	1351335	12.38
OP36777-MSD	310813	4.18	1131926	5.24	707056	6.77	1265424	8.06	1403832	10.66	1279857	12.38
MC28000-12	323872	4.18	1190462	5.24	749971	6.77	1341920	8.06	1419380	10.66	1337826	12.37
ZZZZZZ	303485	4.18	1116695	5.24	700558	6.77	1262569	8.06	1314322	10.66	1199703	12.37
OP36790-MB	305433	4.18	1127899	5.24	715011	6.77	1318843	8.06	1403964	10.66	1335559	12.37
OP36790-BS	285906	4.18	1048163	5.24	659717	6.77	1176479	8.06	1312091	10.66	1191337	12.38
OP36790-BSD	334596	4.18	1211663	5.24	763519	6.77	1338388	8.06	1429797	10.66	1299491	12.38
OP36790-MS	303354	4.18	1093859	5.24	684597	6.77	1218349	8.06	1324697	10.66	1211921	12.38
OP36790-MSD	338402	4.18	1228878	5.24	771501	6.77	1370712	8.06	1496298	10.66	1363081	12.38
MC28000-20	279066	4.18	1028821	5.24	647819	6.77	1189119	8.06	1261874	10.66	1214264	12.37
ZZZZZZ	293809	4.18	1078283	5.24	690804	6.77	1252023	8.06	1350729	10.66	1268088	12.37
ZZZZZZ	294265	4.19	1063258	5.24	685770	6.77	1199080	8.06	1287668	10.66	1242554	12.37
MC28118-1	333197	4.19	1216563	5.25	865499	6.77	1417398	8.06	1465888	10.66	1388562	12.38
MC28118-2	298230	4.18	1104148	5.24	697186	6.77	1277753	8.06	1372777	10.66	1317109	12.37
MC28118-3	315294	4.19	1122464	5.24	713716	6.77	1278563	8.06	1382508	10.66	1336457	12.37
MC28118-4	318132	4.19	1142808	5.24	730737	6.77	1309174	8.06	1389924	10.66	1339934	12.38

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSR1366-CC1262	Injection Date:	02/14/14
Lab File ID:	R37039.D	Injection Time:	14:14
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	333585	4.08	1210935	5.13	775548	6.66	1373582	7.95	1563703	10.52	1418039	12.22
Upper Limit [a]	667170	4.58	2421870	5.63	1551096	7.16	2747164	8.45	3127406	11.02	2836078	12.72
Lower Limit [b]	166793	3.58	605468	4.63	387774	6.16	686791	7.45	781852	10.02	709020	11.72
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
OP36834-MB	367881	4.08	1322042	5.13	828760	6.66	1474853	7.95	1481678	10.52	1360892	12.22
OP36834-BS	390542	4.08	1399142	5.13	866594	6.66	1551013	7.95	1627127	10.52	1462629	12.22
OP36834-MS	361528	4.08	1291329	5.13	800061	6.66	1401191	7.95	1472339	10.52	1340417	12.22
OP36834-MSD	376201	4.08	1339961	5.13	831952	6.66	1458996	7.95	1536516	10.52	1389512	12.22
MC28233-4	378746	4.08	1353255	5.13	848154	6.66	1467361	7.94	1519633	10.52	1389067	12.22
ZZZZZZ	356254	4.08	1245374	5.13	781810	6.66	1362037	7.94	1425899	10.52	1352717	12.22
ZZZZZZ	348230	4.08	1226299	5.13	769946	6.66	1339325	7.94	1402217	10.52	1325256	12.22
ZZZZZZ	376996	4.08	1313394	5.13	821409	6.66	1417257	7.94	1480677	10.52	1394692	12.22
ZZZZZZ	379303	4.08	1339783	5.13	842546	6.66	1475086	7.94	1507549	10.52	1391439	12.22
ZZZZZZ	376591	4.09	1348734	5.14	823640	6.66	1491726	7.95	1523968	10.55	1282407	12.29
ZZZZZZ	341466	4.08	1233007	5.14	775107	6.67	1378110	7.95	1621111	10.52	1668286	12.23
ZZZZZZ	336500	4.08	1189765	5.13	742327	6.66	1279357	7.95	1371993	10.52	1340523	12.22
ZZZZZZ	362204	4.08	1282757	5.13	804372	6.66	1405564	7.95	1453240	10.52	1417009	12.22
ZZZZZZ	371454	4.08	1305911	5.13	816210	6.66	1409377	7.95	1450213	10.52	1408447	12.22
MC28118-1	320329	4.08	1151149	5.13	743321	6.66	1341597	7.95	1415299	10.52	1381929	12.22
MC28118-4	270342	4.08	974689	5.13	623466	6.66	1129148	7.95	1190453	10.52	1152832	12.22

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 Surrogate Recovery Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28118-1	R37054.D	0.0* [a]	16.0	53.0	44.0	40.0	54.0
MC28118-1	R37028.D	20.0	26.0	98.0	73.0	64.0	96.0
MC28118-2	R37029.D	30.0	22.0	69.0	63.0	56.0	93.0
MC28118-3	R37030.D	36.0	28.0	87.0	81.0	73.0	94.0
MC28118-4	R37055.D	19.0	18.0	54.0	39.0	40.0	54.0
MC28118-4	R37031.D	34.0	29.0	94.0	67.0	63.0	90.0
OP36790-BS	R37021.D	42.0	31.0	91.0	85.0	71.0	94.0
OP36790-BSD	R37022.D	37.0	28.0	87.0	79.0	67.0	93.0
OP36790-MB	R37020.D	31.0	23.0	69.0	67.0	54.0	95.0
OP36790-MS	R37023.D	41.0	30.0	90.0	86.0	77.0	96.0
OP36790-MSD	R37024.D	42.0	31.0	94.0	86.0	76.0	97.0

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC28118-1	I87379.D	68.0	55.0	91.0
MC28118-2	I87380.D	59.0	55.0	88.0
MC28118-3	I87381.D	74.0	69.0	89.0
MC28118-4	I87382.D	61.0	61.0	85.0
OP36791-BS	I87369.D	78.0	68.0	91.0
OP36791-BSD	I87370.D	73.0	66.0	87.0
OP36791-MB	I87368.D	63.0	53.0	86.0
OP36791-MS	I87371.D	79.0	72.0	90.0
OP36791-MSD	I87372.D	80.0	72.0	92.0

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36782-MB	BB54236.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168

The QC reported here applies to the following samples: Method: SW846 8011

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0054	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.011	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	112%	36-173%
460-00-4	Bromofluorobenzene (S)	122%	36-173%

8.1.1

Blank Spike Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36782-BS	BB54237.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168

The QC reported here applies to the following samples: Method: SW846 8011

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.095	134	60-140
106-93-4	1,2-Dibromoethane	0.071	0.075	106	60-140

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	115%	36-173%
460-00-4	Bromofluorobenzene (S)	125%	36-173%

8.2.1

8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36782-MS	BB54240.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
OP36782-MSD	BB54241.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168
MC28000-14	BB54242.D	1	02/07/14	CZ	02/06/14	OP36782	GBB3168

The QC reported here applies to the following samples: Method: SW846 8011

MC28118-1, MC28118-2, MC28118-3, MC28118-4, MC28118-6

CAS No.	Compound	MC28000-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.081	114	0.070	99	15	64-141/29
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.057	80	18	63-163/27

CAS No.	Surrogate Recoveries	MS	MSD	MC28000-14 Limits	
460-00-4	Bromofluorobenzene (S)	103%	84%	129%	36-173%
460-00-4	Bromofluorobenzene (S)	106%	91%	133%	36-173%

8.3.1

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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]
MC28118-1	BB54243.D	132.0	157.0
MC28118-2	BB54244.D	115.0	124.0
MC28118-3	BB54245.D	108.0	140.0
MC28118-4	BB54247.D	128.0	122.0
MC28118-6	BB54248.D	126.0	128.0
OP36782-BS	BB54237.D	115.0	125.0
OP36782-MB	BB54236.D	112.0	122.0
OP36782-MS	BB54240.D	103.0	106.0
OP36782-MSD	BB54241.D	84.0	91.0

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3168-ICC3168	Injection Date:	02/07/14
Lab File ID:	BB54231.D	Injection Time:	08:47
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.86	4.13

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB54234A.D	02/07/14	09:59	4.86	4.12
OP36782-MB	BB54236.D	02/07/14	10:48	4.86	4.13
OP36782-BS	BB54237.D	02/07/14	11:12	4.86	4.13
ZZZZZZ	BB54238.D	02/07/14	11:37	4.86	4.13
ZZZZZZ	BB54239.D	02/07/14	12:00	4.86	4.13
OP36782-MS	BB54240.D	02/07/14	12:25	4.86	4.13
OP36782-MSD	BB54241.D	02/07/14	12:49	4.86	4.13
MC28000-14	BB54242.D	02/07/14	13:13	4.86	4.13
MC28118-1	BB54243.D	02/07/14	13:37	4.85	4.12
MC28118-2	BB54244.D	02/07/14	14:01	4.86	4.13
MC28118-3	BB54245.D	02/07/14	14:24	4.85	4.12

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: MC28118
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	GBB3168-CC3168	Injection Date:	02/07/14
Lab File ID:	BB54246.D	Injection Time:	14:48
Instrument ID:	GCBB	Method:	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	4.86	4.13

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC28118-4	BB54247.D	02/07/14	15:13	4.86	4.13
MC28118-6	BB54248.D	02/07/14	15:37	4.85	4.13
GBB3168-ECC3168	BB54249.D	02/07/14	16:01	4.85	4.13

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 – 1st Quarter 2014 Data Review

Laboratory SDG: MC28321

Data Reviewer: Melissa Mansker

Peer Reviewer: Elizabeth Kunkel

Date Reviewed: 3/5/2014

Guidance: USEPA National Functional Guidelines for Superfund Organic Methods Data Review 2008

Sample Identification	Sample Identification
MW1-ROX-021314	MW9-ROX-021314-EB
MW9-ROX-021314	MW3-ROX-021314
ROST3MW-ROX-021314	

1.0 Data Package Completeness

Were all items delivered as specified in the QAPP and COC as appropriate?

No, although the COC requests analyses via methods VOC 8260B and SVOC 8270C; the laboratory has switched over to the most current SW-846 published versions for USEPA Methods 8260 and 8270, USEPA Methods 8260C and 8270D, respectively.

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 the SVOC LCS recovery for benzoic acid was outside evaluation criteria. Acid fraction surrogates 2-fluorophenol, phenol-d_5, and 2,4,6-tribromophenol were reproducibly low, indicating possible matrix interference. Resample results in this SDG were reviewed, however not qualified. Please refer to original sampling results in SDGs MC27657, MC27745, and MC27773 for qualified analytical data. These issues are addressed further in the appropriate sections below. Additionally, the laboratory report was revised to report TICs originally requested per project specifications; no qualification of data was required.

The cooler receipt form indicated samples were received by the laboratory at temperatures of 0.7ºC and 1.2ºC, 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?

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
OP36880-BS	SVOCs	Benzoic acid	**27**	NA	30-130

Data associated with LCS OP36880-BS was reviewed, however not qualified due to possible matrix interference. Please refer to original sampling results in SDGs MC27657, MC27745, and MC27773 for qualified analytical data.

6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Sample ID	Parameter	Surrogate	Recovery (%)	Criteria (%)
MW1-ROX-021314-Run#1	SVOCs	2-Fluorophenol	**9**	15-110
MW1-ROX-021314-Run#1	SVOCs	Phenol-d_5	**0**	15-110
MW1-ROX-021314-Run#1	SVOCs	2,4,6-Tribromophenol	**14**	15-110
MW1-ROX-021314-Run#2	SVOCs	2-Fluorophenol	**7**	15-110
MW1-ROX-021314-Run#2	SVOCs	Phenol-d_5	**0**	15-110
MW1-ROX-021314-Run#2	SVOCs	2,4,6-Tribromophenol	**14**	15-110
MW9-ROX-021314-Run#1	SVOCs	2-Fluorophenol	**10**	15-110
MW9-ROX-021314-Run#1	SVOCs	Phenol-d_5	**0**	15-110
MW9-ROX-021314-Run#1	SVOCs	2,4,6-Tribromophenol	**2**	15-110
MW9-ROX-021314-Run#2	SVOCs	2-Fluorophenol	**0**	15-110
MW9-ROX-021314-Run#2	SVOCs	Phenol-d_5	**0**	15-110
MW9-ROX-021314-Run#2	SVOCs	2,4,6-Tribromophenol	**3**	15-110
MW3-ROX-021314-Run#1	SVOCs	2-Fluorophenol	**4**	15-110
MW3-ROX-021314-Run#1	SVOCs	Phenol-d_5	**4**	15-110
MW3-ROX-021314-Run#2	SVOCs	2-Fluorophenol	**8**	15-110
MW3-ROX-021314-Run#2	SVOCs	Phenol-d_5	**9**	15-110
ROST3MW-ROX-021314-Run#1	SVOCs	2-Fluorophenol	**7**	15-110
ROST3MW-ROX-021314-Run#1	SVOCs	Phenol-d_5	**1**	15-110
ROST3MW-ROX-021314-Run#1	SVOCs	2,4,6-Tribromophenol	**2**	15-110
ROST3MW-ROX-021314-Run#2	SVOCs	2-Fluorophenol	**0**	15-110
ROST3MW-ROX-021314-Run#2	SVOCs	Phenol-d_5	**0**	15-110
ROST3MW-ROX-021314-Run#2	SVOCs	2,4,6-Tribromophenol	**8**	15-110

Acid fraction surrogates 2-fluorophenol, phenol-d_5, and 2,4,6-tribromophenol were reproducibly low, indicating possible matrix interference. Resample results in this SDG were reviewed, however not qualified. Please refer to original sampling results in SDGs MC27657, MC27745, and MC27773 for qualified analytical data.

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

Technical Report for

Shell Oil

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana,

Accutest Job Number: MC28321

Sampling Date: 02/13/14

Report to:

URS Corporation

Melissa.mansker@urs.com

ATTN: Melissa Mansker

Total number of pages in report: **32**

Reviewed on 3/5/2014

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 (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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ACCUTEST LABORATORIES

Elizabeth Kunkel
URS Corporation
1001 Highlands Plaza Drive West Suite 300
St. Louis, MO 63110

RE: Accutest job # MC28321

Ms. Kunkel,

The Accutest report of MC28321 has been revised to report only the Tentatively Identified Compounds (TICs) requested in the project specifications. These changes have been incorporated into the attached report.

Sincerely,

Matthew Morrell
Accutest Laboratories of New England, Inc.

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Sample Summary

Shell Oil

Job No: MC28321

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC28321-1	02/13/14	10:25 LRBH	02/18/14	AQ	Ground Water	MW1-ROX-021314
MC28321-2	02/13/14	10:50 LRBH	02/18/14	AQ	Equipment Blank	MW9-ROX-021314-EB
MC28321-3	02/13/14	12:05 LRBH	02/18/14	AQ	Ground Water	MW9-ROX-021314
MC28321-4	02/13/14	14:15 LRBH	02/18/14	AQ	Ground Water	MW3-ROX-021314
MC28321-5	02/13/14	15:15 LRBH	02/18/14	AQ	Ground Water	ROST3MW-ROX-021314

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shell Oil	**Job No**	MC28321
Site:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central	**Report Date**	2/28/2014 3:17:59 PM

5 Sample(s) were collected on 02/13/2014 and were received at Accutest on 02/18/2014 properly preserved, at 0.7 Deg. C and intact. These Samples received an Accutest job number of MC28321. 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.

Extractables by GCMS By Method SW846 8270D

Matrix AQ **Batch ID:** OP36880

- 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) MC28210-11MS, MC28210-11MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Benzoic Acid are outside control limits. Blank Spike meets program technical requirements.
- OP36880-MS/MSD Recovery(s) for Benzoic Acid, Pyridine are outside control limits. Blank Spike meets program technical requirements.
- MC28321-1,3,4,5 for 2-Fluorophenol, Phenol-d5: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.
- MC28321-1,3,5 for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interferenee. Confirmed by re-extraction/reanalysis.

Matrix AQ **Batch ID:** OP36906

- MC28321-1,3,4,5: Confirmation run.
- MC28321-1,3,4,5 for 2-Fluorophenol, Phenol-d5: Outside control limits due to possible matrix interferenee. Confirmed by re-extraction/reanalysis.
- MC28321-1,3,5 for 2,4,6-Tribromophenol: Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

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(MC28321).

Summary of Hits

Job Number: MC28321
Account: Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Collected: 02/13/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

MC28321-1 MW1-ROX-021314

No hits reported in this sample.

MC28321-2 MW9-ROX-021314-EB

No hits reported in this sample.

MC28321-3 MW9-ROX-021314

No hits reported in this sample.

MC28321-4 MW3-ROX-021314

No hits reported in this sample.

MC28321-5 ROST3MW-ROX-021314

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW1-ROX-021314		
Lab Sample ID:	MC28321-1	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17762.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
Run #2 [a]	W17798.D	1	02/21/14	KR	02/20/14	OP36906	MSW782

	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2	940 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.7	0.44	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.57	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.38	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.4	ug/l	
95-48-7	2-Methylphenol	ND	11	1.5	ug/l	
	3&4-Methylphenol	ND	11	2.3	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.57	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.67	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.7	0.59	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.66	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.36	ug/l	
62-53-3	Aniline	ND	11	0.73	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.7	0.23	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.7	0.98	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.66	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.7	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.7	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.7	0.27	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.7	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.7	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.7	0.75	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.78	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.74	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.7	0.57	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.7	0.45	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.7	0.50	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-021314		
Lab Sample ID:	MC28321-1	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.57	ug/l	
131-11-3	Dimethyl phthalate	ND	5.7	0.57	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.56	ug/l	
118-74-1	Hexachlorobenzene	ND	5.7	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.9	ug/l	
67-72-1	Hexachloroethane	ND	5.7	0.50	ug/l	
78-59-1	Isophorone	ND	5.7	0.23	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.57	ug/l	
100-01-6	4-Nitroaniline	ND	11	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.7	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.7	0.57	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.7	0.93	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.7	0.62	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	9% [b]	7% [b]	15-110%
4165-62-2	Phenol-d5	0% [b]	0% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	14% [b]	14% [b]	15-110%
4165-60-0	Nitrobenzene-d5	69%	70%	30-130%
321-60-8	2-Fluorobiphenyl	68%	70%	30-130%
1718-51-0	Terphenyl-d14	83%	82%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/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:	MW9-ROX-021314-EB		
Lab Sample ID:	MC28321-2	Date Sampled:	02/13/14
Matrix:	AQ - Equipment Blank	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17763.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
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	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.41	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.35	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.3	ug/l	
108-95-2	Phenol	ND	5.4	0.55	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.92	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	0.99	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.14	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.21	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.70	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.69	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	MW9-ROX-021314-EB		
Lab Sample ID:	MC28321-2	Date Sampled:	02/13/14
Matrix:	AQ - Equipment Blank	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.47	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.87	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.58	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	38%		15-110%
4165-62-2	Phenol-d5	26%		15-110%
118-79-6	2,4,6-Tribromophenol	76%		15-110%
4165-60-0	Nitrobenzene-d5	67%		30-130%
321-60-8	2-Fluorobiphenyl	66%		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:	MW9-ROX-021314		
Lab Sample ID:	MC28321-3	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17764.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
Run #2 [a]	W17799.D	1	02/21/14	KR	02/20/14	OP36906	MSW782

	Initial Volume	Final Volume
Run #1	860 ml	1.0 ml
Run #2	840 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	12	1.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.8	0.45	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	12	0.57	ug/l	
120-83-2	2,4-Dichlorophenol	ND	12	0.38	ug/l	
105-67-9	2,4-Dimethylphenol	ND	12	1.3	ug/l	
51-28-5	2,4-Dinitrophenol	ND	23	2.9	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	12	1.4	ug/l	
95-48-7	2-Methylphenol	ND	12	1.5	ug/l	
	3&4-Methylphenol	ND	12	2.4	ug/l	
88-75-5	2-Nitrophenol	ND	12	0.58	ug/l	
100-02-7	4-Nitrophenol	ND	23	0.68	ug/l	
87-86-5	Pentachlorophenol	ND	12	1.5	ug/l	
108-95-2	Phenol	ND	5.8	0.60	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	12	0.67	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	12	0.37	ug/l	
62-53-3	Aniline	ND	12	0.74	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.8	0.24	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.8	0.99	ug/l	
100-51-6	Benzyl Alcohol	ND	12	0.67	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.8	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	12	0.29	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.8	0.24	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.8	0.27	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.8	0.16	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.8	0.23	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.8	0.76	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	12	0.79	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	12	0.75	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.8	0.58	ug/l	
132-64-9	Dibenzofuran	ND	2.3	0.18	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.8	0.45	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.8	0.50	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-021314		
Lab Sample ID:	MC28321-3	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.8	0.58	ug/l	
131-11-3	Dimethyl phthalate	ND	5.8	0.58	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.3	0.57	ug/l	
118-74-1	Hexachlorobenzene	ND	5.8	0.34	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	12	2.9	ug/l	
67-72-1	Hexachloroethane	ND	5.8	0.51	ug/l	
78-59-1	Isophorone	ND	5.8	0.23	ug/l	
88-74-4	2-Nitroaniline	ND	12	0.32	ug/l	
99-09-2	3-Nitroaniline	ND	12	0.58	ug/l	
100-01-6	4-Nitroaniline	ND	12	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.8	0.29	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.8	0.58	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.8	0.94	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.8	0.63	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	10% [b]	0% [b]	15-110%
4165-62-2	Phenol-d5	0% [b]	0% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	2% [b]	3% [b]	15-110%
4165-60-0	Nitrobenzene-d5	80%	72%	30-130%
321-60-8	2-Fluorobiphenyl	77%	72%	30-130%
1718-51-0	Terphenyl-d14	86%	84%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/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:	MW3-ROX-021314		
Lab Sample ID:	MC28321-4	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17765.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
Run #2 [a]	W17800.D	1	02/21/14	KR	02/20/14	OP36906	MSW782

	Initial Volume	Final Volume
Run #1	920 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	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	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:	MW3-ROX-021314		
Lab Sample ID:	MC28321-4	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroaniline	ND	11	4.7	ng/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	4% [b]	8% [b]	15-110%
4165-62-2	Phenol-d5	4% [b]	9% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	46%	46%	15-110%
4165-60-0	Nitrobenzene-d5	75%	73%	30-130%
321-60-8	2-Fluorobiphenyl	74%	71%	30-130%
1718-51-0	Terphenyl-d14	86%	78%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/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:	ROST3MW-ROX-021314		
Lab Sample ID:	MC28321-5	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W17766.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
Run #2 [a]	W17801.D	1	02/21/14	KR	02/20/14	OP36906	MSW782

	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2	900 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	11	1.4	ug/l	
95-57-8	2-Chlorophenol	ND	5.4	0.42	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	11	0.53	ug/l	
120-83-2	2,4-Dichlorophenol	ND	11	0.36	ug/l	
105-67-9	2,4-Dimethylphenol	ND	11	1.2	ug/l	
51-28-5	2,4-Dinitrophenol	ND	22	2.7	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	1.3	ug/l	
95-48-7	2-Methylphenol	ND	11	1.4	ug/l	
	3&4-Methylphenol	ND	11	2.2	ug/l	
88-75-5	2-Nitrophenol	ND	11	0.54	ug/l	
100-02-7	4-Nitrophenol	ND	22	0.63	ug/l	
87-86-5	Pentachlorophenol	ND	11	1.4	ug/l	
108-95-2	Phenol	ND	5.4	0.56	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	11	0.62	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	11	0.34	ug/l	
62-53-3	Aniline	ND	11	0.69	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.4	0.22	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.4	0.93	ug/l	
100-51-6	Benzyl Alcohol	ND	11	0.62	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.4	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	11	0.27	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.4	0.23	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.4	0.25	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.4	0.15	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.4	0.22	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.4	0.71	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	11	0.73	ng/l	
606-20-2	2,6-Dinitrotoluene	ND	11	0.70	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.4	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.2	0.17	ng/l	
84-74-2	Di-n-butyl phthalate	ND	5.4	0.42	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.4	0.47	ug/l	

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

Report of Analysis

Client Sample ID:	ROST3MW-ROX-021314		
Lab Sample ID:	MC28321-5	Date Sampled:	02/13/14
Matrix:	AQ - Ground Water	Date Received:	02/18/14
Method:	SW846 8270D SW846 3510C	Percent Solids:	n/a
Project:	URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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	0.54	ug/l	
131-11-3	Dimethyl phthalate	ND	5.4	0.54	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.2	0.53	ug/l	
118-74-1	Hexachlorobenzene	ND	5.4	0.32	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	11	2.7	ug/l	
67-72-1	Hexachloroethane	ND	5.4	0.48	ug/l	
78-59-1	Isophorone	ND	5.4	0.22	ug/l	
88-74-4	2-Nitroaniline	ND	11	0.30	ug/l	
99-09-2	3-Nitroaniline	ND	11	0.54	ug/l	
100-01-6	4-Nitroauiline	ND	11	4.7	ug/l	
98-95-3	Nitrobenzene	ND	5.4	0.27	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.4	0.54	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.4	0.88	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.4	0.59	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	7% [b]	0% [b]	15-110%
4165-62-2	Phenol-d5	1% [b]	0% [b]	15-110%
118-79-6	2,4,6-Tribromophenol	2% [b]	8% [b]	15-110%
4165-60-0	Nitrobenzeue-d5	63%	66%	30-130%
321-60-8	2-Fluorobiphenyl	56%	62%	30-130%
1718-51-0	Terphenyl-d14	78%	73%	30-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

(a) Confirmation run.
(b) Outside control limits due to possible matrix interference. Confirmed by re-extraction/reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated valne
B = Iudicates aualyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

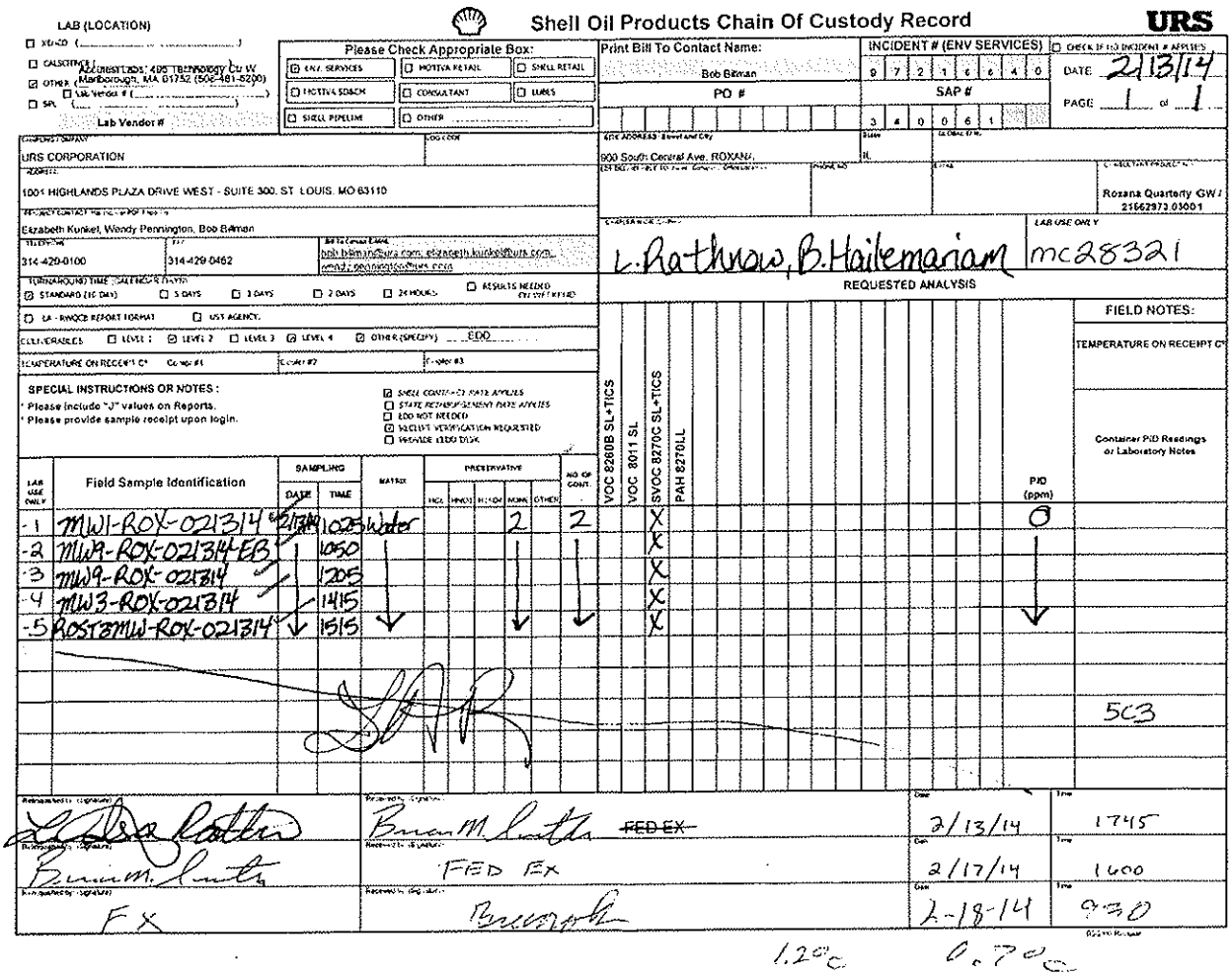
Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

LAB (LOCATION)

☐ XENCO (.....)
☐ CALSCIENCE
☑ OTHER Accutest Labs, 495 Technology Ctr W, Marlborough, MA 01752 (508-481-5200)
☐ Lab Vendor # (.....)
☐ SPL (.....)
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 Billman

PO #

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1

☐ CHECK IF NO INCIDENT # APPLIES
DATE 2/13/14
PAGE 1 of 1

COMPANY/COMPANY: URS CORPORATION
LOG CODE:
SITE ADDRESS (Street and City): 900 South Central Ave, ROXANA, State: IL
GLOBAL ID NO.:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300, ST. LOUIS, MO 63110
EST. DELIVERABLE TO THE COMPANY ORDINATOR:
PHONE NO.:
EXTN.:
CONSULTANT PROJECT NO.: Roxana Quarterly GW / 21662973.03001
PROJECT CONTACT (Name, Location, Phone, Fax): Elizabeth Kunkel, Wendy Pennington, Bob Billman
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill to Contact Name: bob.billman@urs.com; elizabeth.kunkel@urs.com; wendy.pennington@urs.com
CHAIRMAN OF COMPANY: L. Rathnow, B. Hailemariam
LAB USE ONLY: mc28321
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 REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT 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	NONE	OTHER	NO. OF CONT.	VOC 8260B SL+TICS	VOC 8011 SL	SVOC 8270C SL+TICS	PAH 8270LL	PID (ppm)	Container PID Readings or Laboratory Notes
-1	MW1-ROX-021314	2/13/14	1025	Water				2		2			X		0	
-2	MW9-ROX-021314-EB	↓	1050	↓				↓		↓			X		↓	
-3	MW9-ROX-021314	↓	1205	↓				↓		↓			X		↓	
-4	MW3-ROX-021314	↓	1415	↓				↓		↓			X		↓	
-5	ROST3MW-ROX-021314	↓	1515	↓				↓		↓			X		↓	
																5C3

Relinquished by (signature)	Received by (signature)	Date	Time
[signature]	[signature] ~~FED EX~~	2/13/14	1745
[signature]	FED EX	2/17/14	1600
FX	[signature]	2-18-14	930

1.2°C 0.7°C

5.1

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MC28321: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC28321 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 2/18/2014 **Delivery Method:** **Client Service Action Required at Login:** No

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:	Infared gun
3. Cooler media:	Ice (bag)

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
5

MC28321: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC28321

URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC28321-1 Collected: 13-FEB-14 10:25 By: LRBH Received: 18-FEB-14 By: MW1-ROX-021314						
MC28321-1	SW846 8270D	19-FEB-14 16:25	KR	18-FEB-14	TA	AB8270SL+
MC28321-1	SW846 8270D	21-FEB-14 17:54	KR	20-FEB-14	AJ	AB8270SL+
MC28321-2 Collected: 13-FEB-14 10:50 By: LRBH Received: 18-FEB-14 By: MW9-ROX-021314-EB						
MC28321-2	SW846 8270D	19-FEB-14 16:51	KR	18-FEB-14	MEW	AB8270SL+
MC28321-3 Collected: 13-FEB-14 12:05 By: LRBH Received: 18-FEB-14 By: MW9-ROX-021314						
MC28321-3	SW846 8270D	19-FEB-14 17:16	KR	18-FEB-14	TA	AB8270SL+
MC28321-3	SW846 8270D	21-FEB-14 18:17	KR	20-FEB-14	AJ	AB8270SL+
MC28321-4 Collected: 13-FEB-14 14:15 By: LRBH Received: 18-FEB-14 By: MW3-ROX-021314						
MC28321-4	SW846 8270D	19-FEB-14 17:41	KR	18-FEB-14	MEW	AB8270SL+
MC28321-4	SW846 8270D	21-FEB-14 18:41	KR	20-FEB-14	AJ	AB8270SL+
MC28321-5 Collected: 13-FEB-14 15:15 By: LRBH Received: 18-FEB-14 By: ROST3MW-ROX-021314						
MC28321-5	SW846 8270D	19-FEB-14 18:06	KR	18-FEB-14	TA	AB8270SL+
MC28321-5	SW846 8270D	21-FEB-14 19:05	KR	20-FEB-14	AJ	AB8270SL+

Accutest Internal Chain of Custody

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL
Received: 02/18/14

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC28321-1.1	Walk In Ref #22	Michael DiBuono	02/18/14 13:52	Retrieve from Storage
MC28321-1.2	Walk In Ref #22	Thomas Abruzzise	02/20/14 14:31	Retrieve from Storage
MC28321-2.2	Walk Iu Ref #22	Michael DiBuono	02/18/14 13:52	Retrieve from Storage
MC28321-3.1	Walk In Ref #22	Thomas Abruzzise	02/20/14 14:31	Retrieve from Storage
MC28321-3.2	Walk In Ref #22	Michael DiBuono	02/18/14 13:52	Retrieve from Storage
MC28321-4.1	Walk In Ref #22	Michael DiBuono	02/18/14 13:52	Retrieve from Storage
MC28321-4.2	Walk In Ref #22	Thomas Abruzzise	02/20/14 14:31	Retrieve from Storage
MC28321-5.1	Walk In Ref #22	Michael DiBuono	02/18/14 13:52	Retrieve from Storage
MC28321-5.2	Walk In Ref #22	Thomas Abruzzise	02/20/14 14:31	Retrieve from Storage

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: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-MB	W17757.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	1.3	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.38	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.49	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.33	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	1.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.2	ug/l	
95-48-7	2-Methylphenol	ND	10	1.3	ug/l	
	3&4-Methylphenol	ND	10	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.50	ug/l	
100-02-7	4-Nitrophenol	ND	20	0.58	ug/l	
87-86-5	Pentachlorophennl	ND	10	1.3	ug/l	
108-95-2	Phenol	ND	5.0	0.51	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.57	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.32	ug/l	
62-53-3	Aniline	ND	10	0.64	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.20	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.85	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.57	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.92	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.25	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.21	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.23	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.13	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.20	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.65	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.68	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.64	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.16	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.39	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.43	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.50	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.50	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.49	ug/l	
118-74-1	Hexachlorobeuzene	ND	5.0	0.30	ug/l	

Method Blank Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-MB	W17757.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	2.5	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.44	ug/l	
78-59-1	Isophorone	ND	5.0	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.28	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.50	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.3	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.25	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.50	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.81	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.54	ug/l	
110-86-1	Pyridine	ND	10	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	47%	15-110%
4165-62-2	Phenol-d5	34%	15-110%
118-79-6	2,4,6-Tribromophenol	85%	15-110%
4165-60-0	Nitrobenzene-d5	85%	30-130%
321-60-8	2-Fluorobiphenyl	80%	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	

6.1.1

Blank Spike Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-BS	W17758.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	13.6	27* a	30-130
95-57-8	2-Chlorophenol	50	39.8	80	30-130
59-50-7	4-Chloro-3-methyl phenol	50	46.6	93	30-130
120-83-2	2,4-Dichlorophenol	50	48.0	96	30-130
105-67-9	2,4-Dimethylphenol	50	40.8	82	30-130
51-28-5	2,4-Dinitrophenol	50	34.6	69	30-130
534-52-1	4,6-Dinitro-o-cresol	50	46.1	92	30-130
95-48-7	2-Methylphenol	50	36.5	73	30-130
	3&4-Methylphenol	100	68.8	69	30-130
88-75-5	2-Nitrophenol	50	46.6	93	30-130
100-02-7	4-Nitrophenol	50	19.3	39	30-130
87-86-5	Pentachlorophenol	50	36.8	74	30-130
108-95-2	Phenol	50	18.3	37	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	27.8	56	40-140
101-55-3	4-Bromophenyl phenyl ether	50	52.9	106	40-140
85-68-7	Butyl benzyl phthalate	50	53.5	107	40-140
100-51-6	Benzyl Alcohol	50	33.3	67	40-140
91-58-7	2-Chloronaphthalene	50	47.0	94	40-140
106-47-8	4-Chloroaniline	50	40.4	81	40-140
111-91-1	bis(2-Chloroethoxy)methane	50	44.7	89	40-140
111-44-4	bis(2-Chloroethyl)ether	50	43.4	87	40-140
108-60-1	bis(2-Chloroisopropyl)ether	50	45.8	92	40-140
7005-72-3	4-Chlorophenyl phenyl ether	50	50.0	100	40-140
122-66-7	1,2-Diphenylhydrazine	50	46.4	93	40-140
121-14-2	2,4-Dinitrotoluene	50	51.9	104	40-140
606-20-2	2,6-Dinitrotoluene	50	50.1	100	40-140
91-94-1	3,3'-Dichlorobenzidine	50	47.4	95	40-140
132-64-9	Dibenzofuran	50	45.1	90	40-140
84-74-2	Di-n-butyl phthalate	50	47.6	95	40-140
117-84-0	Di-n-octyl phthalate	50	55.0	110	40-140
84-66-2	Diethyl phthalate	50	47.7	95	40-140
131-11-3	Dimethyl phthalate	50	38.3	77	40-140
117-81-7	bis(2-Ethylhexyl)phthalate	50	53.2	106	40-140
118-74-1	Hexachlorobenzene	50	53.9	108	40-140

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-BS	W17758.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	22.0	44	40-140
67-72-1	Hexachloroethane	50	27.2	54	40-140
78-59-1	Isophorone	50	45.9	92	40-140
88-74-4	2-Nitroaniline	50	48.8	98	40-140
99-09-2	3-Nitroaniline	50	45.7	91	40-140
100-01-6	4-Nitroaniline	50	47.1	94	40-140
98-95-3	Nitrobenzene	50	46.2	92	40-140
62-75-9	n-Nitrosodimethylamine	50	28.3	57	40-140
621-64-7	N-Nitroso-di-n-propylamine	50	46.7	93	40-140
86-30-6	N-Nitrosodiphenylamine	50	47.6	95	40-140
110-86-1	Pyridine	50	21.7	43	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	90%	15-110%
4165-60-0	Nitrobenzene-d5	84%	30-130%
321-60-8	2-Fluorobiphenyl	79%	30-130%
1718-51-0	Terphenyl-d14	92%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-MS	W17759.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
OP36880-MSD	W17760.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
MC28210-11	W17761.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	MC28210-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		50	12.6	25* [a]	11.3	23* [a]	11	30-130/20
95-57-8	2-Chlorophenol	ND		50	36.3	73	35.7	71	2	30-130/20
59-50-7	4-Chloro-3-methyl phenol	ND		50	43.1	86	42.3	85	2	30-130/20
120-83-2	2,4-Dichlorophenol	ND		50	43.1	86	42.1	84	2	30-130/20
105-67-9	2,4-Dimethylphenol	ND		50	38.5	77	37.2	74	3	30-130/20
51-28-5	2,4-Dinitrophenol	ND		50	32.4	65	34.9	70	7	30-130/20
534-52-1	4,6-Dinitro-o-cresol	ND		50	46.7	93	46.0	92	2	30-130/20
95-48-7	2-Methylpheuol	ND		50	32.6	65	32.6	65	0	30-130/20
	3&4-Methylphenol	ND		100	61.7	62	62.8	63	2	30-130/20
88-75-5	2-Nitrophenol	ND		50	42.1	84	41.4	83	2	30-130/20
100-02-7	4-Nitrophenol	ND		50	19.0	38	18.1	36	5	30-130/20
87-86-5	Pentachlorophenol	ND		50	35.4	71	35.8	72	1	30-130/20
108-95-2	Phenol	ND		50	15.8	32	16.1	32	2	30-130/20
95-95-4	2,4,5-Trichlorophenol	ND		50	44.6	89	45.0	90	1	30-130/20
88-06-2	2,4,6-Trichlorophenol	ND		50	43.3	87	43.6	87	1	30-130/20
62-53-3	Aniline	ND		50	25.7	51	25.1	50	2	40-140/20
101-55-3	4-Bromophenyl phenyl ether	ND		50	50.8	102	51.7	103	2	40-140/20
85-68-7	Butyl benzyl phthalate	ND		50	52.0	104	51.9	104	0	40-140/20
100-51-6	Benzyl Alcohol	ND		50	28.8	58	29.3	59	2	40-140/20
91-58-7	2-Chloronaphthalene	ND		50	42.5	85	42.4	85	0	40-140/20
106-47-8	4-Chloroaniline	ND		50	37.8	76	37.4	75	1	40-140/20
111-91-1	bis(2-Chloroethoxy)methane	ND		50	40.4	81	40.8	82	1	40-140/20
111-44-4	bis(2-Chloroethyl)ether	ND		50	39.0	78	38.4	77	2	40-140/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		50	41.7	83	41.2	82	1	40-140/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		50	46.4	93	47.7	95	3	40-140/20
122-66-7	1,2-Diphenylhydrazine	ND		50	44.0	88	45.9	92	4	40-140/20
121-14-2	2,4-Dinitrotoluene	ND		50	49.6	99	49.5	99	0	40-140/20
606-20-2	2,6-Dinitrotoluene	ND		50	46.3	93	47.2	94	2	40-140/20
91-94-1	3,3'-Dichlorobenzidine	ND		50	47.4	95	46.4	93	2	40-140/20
132-64-9	Dibenzofuran	ND		50	41.4	83	42.2	84	2	40-140/20
84-74-2	Di-n-butyl phthalate	ND		50	46.7	93	47.2	94	1	40-140/20
117-84-0	Di-n-octyl phthalate	ND		50	53.7	107	53.3	107	1	40-140/20
84-66-2	Diethyl phthalate	ND		50	45.9	92	46.7	93	2	40-140/20
131-11-3	Dimethyl phthalate	ND		50	36.0	72	38.2	76	6	40-140/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		50	52.3	105	52.3	105	0	40-140/20
118-74-1	Hexachlorobenzene	ND		50	52.3	105	52.6	105	1	40-140/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP36880-MS	W17759.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
OP36880-MSD	W17760.D	1	02/19/14	KR	02/18/14	OP36880	MSW780
MC28210-11	W17761.D	1	02/19/14	KR	02/18/14	OP36880	MSW780

The QC reported here applies to the following samples: Method: SW846 8270D

MC28321-1, MC28321-2, MC28321-3, MC28321-4, MC28321-5

CAS No.	Compound	MC28210-11 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		50	20.4	41	20.2	40	1	40-140/20
67-72-1	Hexachloroethane	ND		50	25.6	51	25.7	51	0	40-140/20
78-59-1	Isophorone	ND		50	42.4	85	42.8	86	1	40-140/20
88-74-4	2-Nitroaniline	ND		50	44.9	90	45.1	90	0	40-140/20
99-09-2	3-Nitroaniline	ND		50	42.0	84	42.3	85	1	40-140/20
100-01-6	4-Nitroaniline	ND		50	44.1	88	45.1	90	2	40-140/20
98-95-3	Nitrobenzene	ND		50	41.8	84	42.0	84	0	40-140/20
62-75-9	n-Nitrosodimethylamine	ND		50	25.0	50	25.2	50	1	40-140/20
621-64-7	N-Nitroso-di-n-propylamine	ND		50	42.5	85	42.7	85	0	40-140/20
86-30-6	N-Nitrosodiphenylamine	ND		50	46.0	92	47.2	94	3	40-140/20
110-86-1	Pyridine	ND		50	19.2	38* [a]	18.6	37* [a]	3	40-140/20

CAS No.	Surrogate Recoveries	MS	MSD	MC28210-11	Limits
367-12-4	2-Fluorophenol	42%	43%	43%	15-110%
4165-62-2	Phenol-d5	29%	29%	31%	15-110%
118-79-6	2,4,6-Tribromophenol	88%	92%	79%	15-110%
4165-60-0	Nitrobenzene-d5	77%	77%	81%	30-130%
321-60-8	2-Fluorobiphenyl	71%	72%	78%	30-130%
1718-51-0	Terphenyl-d14	89%	88%	86%	30-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW780-CC768	Injection Date:	02/19/14
Lab File ID:	W17756.D	Injection Time:	13:54
Instrument ID:	GCMSW	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	126233	4.27	464520	5.33	316218	6.87	569057	8.17	570465	10.81	519105	12.56
Upper Limit [a]	252466	4.77	929040	5.83	632436	7.37	1138114	8.67	1140930	11.31	1038210	13.06
Lower Limit [b]	63117	3.77	232260	4.83	158109	6.37	284529	7.67	285233	10.31	259553	12.06
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
OP36880-MB	99002	4.27	372834	5.33	254838	6.87	433642	8.16	439416	10.81	407918	12.55
OP36880-BS	110410	4.27	401116	5.33	270529	6.87	480819	8.17	476817	10.81	433181	12.56
OP36880-MS	106256	4.27	383047	5.33	264436	6.87	453603	8.17	446788	10.81	403638	12.55
OP36880-MSD	96668	4.27	351990	5.33	240441	6.87	408091	8.16	413522	10.81	375510	12.55
MC28210-11	107560	4.27	399057	5.33	273118	6.87	467222	8.16	480932	10.81	434877	12.55
MC28321-1	96402	4.27	353660	5.33	238092	6.87	410452	8.16	411894	10.81	382400	12.55
MC28321-2	100621	4.27	371446	5.33	252982	6.86	439853	8.16	448922	10.81	411498	12.55
MC28321-3	109742	4.27	404072	5.33	276108	6.87	484536	8.16	492877	10.81	458888	12.55
MC28321-4	120524	4.27	450017	5.33	298133	6.87	505041	8.16	513957	10.81	474151	12.55
MC28321-5	97118	4.27	362622	5.33	248644	6.86	439762	8.16	470071	10.81	439511	12.55
ZZZZZZ	126191	4.27	464743	5.33	310551	6.86	548102	8.16	531280	10.81	480454	12.55
ZZZZZZ	109856	4.27	404823	5.33	265564	6.87	443709	8.16	451812	10.81	417563	12.55
ZZZZZZ	110152	4.27	408540	5.33	280057	6.87	478500	8.16	438143	10.81	396981	12.55
ZZZZZZ	114705	4.27	424834	5.33	278128	6.87	454331	8.16	442277	10.81	386384	12.55

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

(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: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 900 South Central Avenue, Roxana, IL

Check Std:	MSW782-CC768	Injection Date:	02/21/14
Lab File ID:	W17787.D	Injection Time:	13:29
Instrument ID:	GCMSW	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	88949	4.25	335993	5.31	240629	6.85	432563	8.15	447898	10.78	412215	12.52
Upper Limit [a]	177898	4.75	671986	5.81	481258	7.35	865126	8.65	895796	11.28	824430	13.02
Lower Limit [b]	44475	3.75	167997	4.81	120315	6.35	216282	7.65	223949	10.28	206108	12.02
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
OP36914-MB	89589	4.25	335529	5.31	234515	6.85	400430	8.14	432895	10.77	393511	12.52
OP36914-BS	85603	4.25	319533	5.31	221578	6.85	388899	8.14	393581	10.78	355959	12.52
OP36914-BSD	82346	4.25	304227	5.31	212952	6.85	379326	8.14	379178	10.78	338168	12.51
OP36906-MB	82766	4.25	315224	5.31	219022	6.85	379948	8.14	410325	10.77	379451	12.51
OP36906-BS	74160	4.25	279431	5.31	198273	6.85	350156	8.14	366325	10.78	343257	12.52
OP36906-MS	81564	4.25	307184	5.31	213697	6.85	377812	8.14	389231	10.78	363865	12.52
OP36906-MSD	83346	4.25	309010	5.31	215567	6.85	376439	8.14	397182	10.78	360722	12.52
MC28210-20	86713	4.25	330057	5.31	232457	6.85	399641	8.14	440185	10.77	401232	12.51
ZZZZZZ	86513	4.25	330632	5.31	236828	6.85	414246	8.14	443721	10.77	407098	12.51
ZZZZZZ	83506	4.25	326908	5.31	235014	6.85	420459	8.14	445351	10.77	418738	12.51
MC28321-1 [c]	85187	4.25	326790	5.31	227773	6.85	391052	8.14	415607	10.77	383196	12.51
MC28321-3 [c]	85706	4.25	329096	5.31	228053	6.85	400735	8.14	426213	10.77	394009	12.51
MC28321-4 [c]	85519	4.25	317010	5.31	218081	6.85	370811	8.14	405128	10.78	378723	12.52
MC28321-5 [c]	79901	4.25	296004	5.31	208695	6.85	370619	8.14	393365	10.77	362760	12.51
ZZZZZZ	75106	4.25	286156	5.31	195501	6.85	340729	8.14	328627	10.77	309691	12.52
ZZZZZZ	72311	4.25	277892	5.31	190606	6.85	325150	8.14	307449	10.78	292429	12.52
ZZZZZZ	77195	4.25	282342	5.31	196180	6.85	330254	8.14	304605	10.78	290311	12.52
ZZZZZZ	71896	4.25	267406	5.31	180358	6.85	297186	8.15	296975	10.80	286746	12.54
ZZZZZZ	69612	4.25	274043	5.31	186814	6.85	313035	8.14	296615	10.78	275782	12.52
ZZZZZZ	82542	4.25	289019	5.31	190163	6.85	311242	8.15	303243	10.78	289857	12.52
ZZZZZZ	71493	4.25	273370	5.31	188009	6.85	310460	8.14	301921	10.78	288007	12.53
ZZZZZZ	73595	4.25	271476	5.31	191742	6.85	326056	8.14	313011	10.78	291693	12.52
ZZZZZZ	70151	4.25	272616	5.31	191593	6.85	324871	8.14	301850	10.78	281109	12.52
ZZZZZZ	75761	4.25	288363	5.31	202050	6.85	336725	8.15	316273	10.78	296593	12.53

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.
(c) Confirmation run.

6.4.2

Semivolatile Surrogate Recovery Summary

Job Number: MC28321
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana 1Q14 GW/ 21562973.03001 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
MC2832I-1	W17762.D	9.0* [a]	0.0* [a]	14.0* [a]	69.0	68.0	83.0
MC28321-1	W17798.D	7.0* [a]	0.0* [a]	14.0* [a]	70.0	70.0	82.0
MC28321-2	W17763.D	38.0	26.0	76.0	67.0	66.0	91.0
MC28321-3	W17764.D	10.0* [a]	0.0* [a]	2.0* [a]	80.0	77.0	86.0
MC28321-3	W17799.D	0.0* [a]	0.0* [a]	3.0* [a]	72.0	72.0	84.0
MC28321-4	W17765.D	4.0* [a]	4.0* [a]	46.0	75.0	74.0	86.0
MC28321-4	W17800.D	8.0* [a]	9.0* [a]	46.0	73.0	71.0	78.0
MC28321-5	W17766.D	7.0* [a]	1.0* [a]	2.0* [a]	63.0	56.0	78.0
MC28321-5	W17801.D	0.0* [a]	0.0* [a]	8.0* [a]	66.0	62.0	73.0
OP36880-BS	W17758.D	46.0	33.0	90.0	84.0	79.0	92.0
OP36880-MB	W17757.D	47.0	34.0	85.0	85.0	80.0	94.0
OP36880-MS	W17759.D	42.0	29.0	88.0	77.0	71.0	89.0
OP36880-MSD	W17760.D	43.0	29.0	92.0	77.0	72.0	88.0

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 re-extraction/reanalysis.